JOHN J. LEWANDOWSKI
Distinguished University Professor
Arthur P. Armington Professor of Engineering II
Director - Advanced Manufacturing and Mechanical Reliability Center (AMMRC)
Department of Materials Science & Engineering, Case Western Reserve University (CWRU)

EDUCATION

Ph.D./M.E./B.S.	Metallurgical Engineering and Materials Science, Carnegie-Mellon, 1984, 1981, 1979

EXPERIENCE

2021 - Present	Distinguished University Professor, Case Western Reserve University
2015 - 2019	Summer Visiting Professor – Singapore Center for 3D Printing (SC3DP) Nanyang Technological University (NTU), Singapore
2013 - Present	Arthur P. Armington Professor of Engineering II, Dept. Matl's Sci. & Eng. Case Western Reserve University, Cleveland, OH.
2011 - Present	Professor-Courtesy Appt., Dept. Mechanical & Aerospace Engineering, Case Western Reserve University, Cleveland, OH.
2003 - Present	Overseas Fellow, Churchill College, University of Cambridge, U.K. Dept. Materials Science and Metallurgy, University of Cambridge, U.K.
2000 - 2013	Leonard Case Jr. Professor of Materials Science and Engineering, Case Western Reserve University, Cleveland, OH.
1994 - 2000	Professor, Dept. Materials Science and Engineering, Case Western Reserve University, Cleveland, OH.
1990 - 1994	Associate Professor, Dept. Materials Science and Engineering, Case Western Reserve University, Cleveland, OH.
2009 - Present	Director-Nitinol Commercialization Accelerator
1987 - Present	Director-Advanced Manufacturing and Mechanical Reliability Center (AMMRC)
1986 - 1990	Assistant Professor, Dept. Matl's Sci. & Eng., CWRU, Cleveland, OH
1987	Summer Visiting Scientist, Wright Patterson Air Force Base, Dayton, OH.
1986	Summer Visiting Scientist, Dept. Metallurgy and Materials Science
1984 - 1986	NATO/NSF Postdoctoral Fellow, Dept. Metallurgy and Materials Science, University of Cambridge, Cambridge, U.K.
1981 - 1984	HERTZ Foundation Fellow, Dept. Metall. Eng. and Materials Science,
1979 - 1981	ALLEGHENY INT'L Fellow, Dept. Metall. Eng. and Materials Science, Carnegie-Mellon University, Pittsburgh, PA.
1975 - 1979	Co-Op Metallurgical Engineer, CHEVRON U.S.A., Inc., Richmond, CA

BIOGRAPHY- JOHN J. LEWANDOWSKI

John J. Lewandowski is Distinguished University Professor, Arthur P. Armington Professor of Engineering II at Case Western Reserve University, and Director of the Advanced Manufacturing and Mechanical Reliability Center (AMMRC: https://ammrc.case.edu/). B.S., M.E., Ph.D. were in Metallurgical Engineering and Materials Science at Carnegie Mellon University. M.E. research was on hydrogen embrittlement of austenitic stainless steels. Ph.D. research as HERTZ Foundation Fellow was on fracture/hydrogen embrittlement of pearlitic rail steels. He spent 2 years as Metallurgical Engineer/Failure Analyst at the CHEVRON, USA Richmond Refinery.

Two years were spent working with Prof. John F. Knott, FRS, OBE, as a NATO/NSF Postdoctoral Fellow in the Department of Materials Science and Metallurgy at Cambridge University, England. Fracture and fatigue projects included: stress relief embrittlement and fracture/fatigue of 2 1/4 Cr-1 Mo steels; Pb-induced solid metal embrittlement of aluminum alloy pressure vessels; and impurity effects on fracture of 1st generation Al-Li alloys.

He joined CWRU as Assistant Professor of Materials Science and Engineering in 1986 and is currently Distinguished University Professor, Arthur P. Armington Professor of Engineering II, Director of the Advanced Manufacturing and Mechanical Reliability Center, and Professor of Mechanical and Aerospace Engineering. Research/teaching interests include: processing/structure/property relationships in ferrous/non-ferrous engineering materials; superposed pressure effects on deformation/fracture; fatigue/fracture of intermetallics and composites, metallic glasses, HEAs, layered/laminated systems; novel deformation processing; blast-resistant materials; advanced lightweight materials; fracture/fatigue of biomedical materials; failure analysis; additive manufacturing.

He has received a number of national/international awards for research/teaching. Research awards include: Allegheny Int'l Research Fellowship (CMU), HERTZ Foundation Graduate Fellowship (CMU), NATO/NSF and ALCAN Postdoctoral Fellowships (Cambridge University), NSF Presidential Young Investigator Award, ASM Research Silver Medal, Charles Hatchett Award-Institute of Metals (U.K.) for Nb work. He was elected Overseas Fellow at Churchill College, Cambridge University, where he spent a sabbatical year for 2003-04. He received a Meritorious Service Award by the Case Alumni Association (CAA) in 2008, Case School of Engineering (CSE) Research Award (2005, 2009), TMS Leadership Award (2014), CWRU Distinguished University Professor (2021), and TMS Fellow (2022). His recent Nature Materials (NM) paper on bulk metallic glasses was selected for a News and Views Article in NM; was selected as an Editor's Choice Paper in Science; and was selected by NM editors as one of the twenty most influential papers published in NM from 2002-2012.

In the areas of teaching/mentoring, he has advised 81 MS students and 33 Ph.D. students, in addition to over 50 post-doctoral, visiting scholars, and staff. He has received the CTSC Technical Educator Award, SAE Ralph R. Teetor Educational Award, ASM Bradley Stoughton Award for Young Teachers, ASM 2022 Albert Easton White Distinguished Teacher Award, and the John S. Diekhoff Award for Graduate Teaching and Mentoring at CWRU. He has served on numerous panels organized by the NSF, NRC/NAS as well as the Institute of Mechanics and Materials at UC San Diego. He is on the editorial board of three journals and has co-organized 45 conferences, including one Gordon Conference on Physical Metallurgy. He was elected Fellow of ASM in 1995 and is past Chair of ASM/TMS Joint Composites Committee. Publications and presentations exceed 350 and 1050, respectively, with an h-index > 65. His top 55 papers have been cited over 6,000 times.

Personal interests include hiking, orienteering, coaching baseball, and competitive running. He has placed 3rd/1st overall in the 1999/2000 Cleveland 9th Street Mile, respectively, with times of 4:44/4:27, and placed 21st/8th/12th/16th/9th/9th/8th/10th/15th/18th/20th(tie)/39th/55th/63rd/87th/124th/111th overall in the Pittsburgh 5K Great Race: 1998/1999/2000/2001/2002/2004/2005/2006/2007/2008/2012/2013/2014/2016/2017/2018/2019 with times: 17:49/17:05/17:07/17:12/16:52/17:11/16:58/17:43/17:35/17:45/18:20/18:14/19:05/19:12/21:29/21:48/21:01. He competed in the 2013 Senior Olympics 400/800/1500/5000 races held in Cleveland, OH and finished 10th(64.9)/5th(2:26)/6th(5:02)/4th, respectively. Competing in the 200/400/800/1500 at the 2017 Senior Olympics in Birmingham, AL he finished 22nd(33.6)/12th(67.6)/6th(2:33)/4th(5:17), respectively. Masters All-American Track & Field Status was earned for these 5K performances: 16:52 (2002), 18:20 (2012), 18:14 (2013), for the 4:27 mile (2000), for the 2:33-800 meters (2017) and for both the 5:02/5:17-1500 meters (2013/2017).

PROFESSIONAL ACTIVITIES

National Academy of Sciences/National Research Council:
- STAR/BAST Committee, 1989-92
- Long Term Aging Effects Panel, 1994-95
- NRC Fellowship Evaluation Panel, 1997-2001, 2015-2016
- AFSTB Committee on Hypersonics, 1997-98
- Matl's Panel Lead on Review of NIST Engineering Laboratory, 2020-21

National Science Foundation:
- NSF/PYI Workshop on Science, Math, and Engineering Education, 1990
- NSF Workshop on Processing of Advanced Structural Materials, 1992
- NSF/PYI Workshop on Future Problems in Mechanics of Materials, 1993
- NSF Evaluation Panels, 1994, 1998
- NSF Review Panels, 2009, 2016, 2019
- NSF Workshop-Emerging Research Areas in Metals/Metallic Nanostructures, 2012
- NSF/UCSB Workshop on Education in Materials, 2015

Cleveland Chapter ASM International:
- Executive Committee, 1988-92, 1993-96, 2000-02
- Chairman, Education Committee, 1990-91; Student Affairs Cmte, 1986-87
- Chairman, Zay Jeffries Night Committee, 1987-88, 1992-93

ASM International Committees:
- ASM/TMS Joint Composites Committee, 1986-Present;
  Secretary, 1997; Vice Chair, 1999 - 2001; Chair, 2001 - 2003
- Scholarship Committee, 1993-2001; Education Committee, 1992-2001
- ASM Research Silver Medal Committee, 1999-2013
- ASM Bronze Medal Committee, 2015-2018
- ASM Albert Easton White Distinguished Teacher Award, 2015-2018
- ASM Bradley Stoughton Award Committee, 2007-2013
- International Materials Review Committee, 2007-2014

TMS-AIME Committees:
- Mechanical Metallurgy Committee, 1986-Present
- Student Affairs Committee, 1989-93; Scholarship Committee, 1997-2001
- Leadership/Educator/Application to Practice Awards Committee, 2009-12
- Leadership/Mehl Awards Committee, 2020-23
- TMS Materials for Energy: Innovation Impact Technology Cmte, 2010-11
  - Innovation Impact Team Lead - Materials for Extreme Environments
- TMS Ad Hoc Committee on Core TMS Activities, Chair - 2012
- TMS Metamorphic Manufacturing Team, 2018-Present
- TMS HEA Study Panel, 2021

Ohio Aerospace Institute (OAI):
- Composites Steering Committee, 1989-95: Scholarship Committee, 1989-94
- Affiliated Faculty Member, 1989-Present

Materials Research Society, ASM International, TMS: Member, 1986-Present

Editorial Boards: Metall. and Matl's Trans., Adv. Matl's Proc., VPP
Workshop Participant/Proposal Reviewer:
ARO, DARPA, AFOSR, ONR, DOE, NSF, State Programs, Int'l Programs

Journal Article Reviewer
Nature, Nature Matls, Science, Acta/Scripta Mater, Matl's Sci. Eng., Adv. Matl's, IMR, IJSS, APL, Matl's Trans A, Jnl Matl's Sci., Philos. Mag. A, Philos. Mag. A Lett, ASTM, IJSS, Jnl Matl's Rsch, Jnl Comp Matl's, Jnl Alloys/Compounds

UNIVERSITY ACTIVITIES

Case Western Reserve University

CWRU Faculty/Staff Athletic Advisor to Men/Women Track Team, 2008-Present
Graduate Studies Committee, Secretary, 1989-90, 1991-93, 1994, 2005-07
Graduate Studies Committee, Chairman, 1990-91, 1993-94
Graduate Studies Alumni Annual Fund Telethon, 1986-92
Faculty Interviewer - CWRU Scholarship Day, 1986-92
Faculty Senate Nominating Committee, 1996-2002, 2017-20, Chair, 2000-02
President's Advisory Committee, 1995, 1999, 2008, 2019
CSE Strategic Planning Committee, 2004-05
CSE Ad Hoc SAGES Committee, 2004-05
CWRU NSF-ACES Committee, 2004-2013
CWRU Honorary Degree Committee, 2006-present
CSE Dean's Search Committee, 1996-97, 2006-07
CSE Ad Hoc Staff Resources Committee, 2007-08
CSE Appointments Committee, Chair: 2007-08; Member: 2016-20; Chair: 2018
Advanced Materials Alliance, Co-Chair, 2009-2017
Advanced Materials Strategic Hiring Committee, 2010 - 2013
Chairman of Advanced Materials Sub-committee, 2011 - 2013
Cluster Leader on Sustainable Manufacturing of Materials, 2010 - 2013
EMAE Department Chair Search Committee, 2014
EMAE Strategic Hiring Committee, 2015 - 2016
ECIV Department Faculty Hire Committee, 2017-18
CSE Department Merger Committee, 2011
CSE Dean Review Committee, 2011
PRI Evaluation Team, 2007, 2008
Executive Committee, 2001-03
Research Committee, 1997-98

Department of Materials Science and Engineering

Undergraduate Studies Committee, 1986-87, 1991-92, 1996-2007, 2009-2013
Director-Advanced Manufacturing & Mechanical Reliability Center, 1987-Present
Director - Nitinol Commercialization Accelerator, 2009-Present
Graduate Studies Committee, 1986-2014, 2016-; Chair, 2001-03, 2008, 2012-14, 2018-20
UG Curriculum Review Committee, 2011-2014
G Curriculum Review Committee, 2012-2014
Faculty Advisor: Class of 1989, 1998, 2001, 2007, 2012
-Undergraduate Materials Society, 1988-94
ASM Enhancement of Technical Awareness Award, 1991
TMS Student Chapter of Excellence Award, 1991

AWARDS AND HONORS

TMS Fellow (2022)
ASM Albert Easton White Distinguished Teacher Award (2022)
Distinguished University Professor, CWRU (2021)
Nominee - John S. Diekhoff Award for Graduate Mentoring, CWRU (2017, 2020)
Los Alamos National Lab Institute for Materials Science Invited Seminar Speaker (2015)
Gordon Conference on Physical Metallurgy Speaker (2015)
Summer Visiting Professor-Singapore Center for 3D Printing (SC3DP), Singapore (2015-18
TMS Leadership Award (2014)
Masters All American T&F (mile-2000), (5K-2002, 2012, 2013),(800m-2017),(1500m-2013/2017)
ASMI Cleveland Chapter Award of Distinction (2013)
Invited Paper-Modern Fracture Mechanics: Sir Alan Cottrell Special Issue in Philos. Mag. (2013)
Arthur P. Armington Professorship in Engineering II (2013 - Present)
Nominee - Srinivasa P. Gutti Memorial Engineering Teaching Award (2007, 2012, 2014)
ASMI Cleveland Chapter Technical Educator Award, ASMI (2010)
Case School of Engineering Research Award, CWRU (2009)
Meritorious Service Award - Case Alumni Association (CAA) (2008)
Nature Materials (NM) Paper Selected One of 20 Most Influential NM Papers Since 2002 (2012)
Nature Materials Paper Selected as Editors Choice Paper, Science (2006)
John S. Diekhoff Award for Graduate Teaching and Mentoring, CWRU (2006)
Case School of Engineering Graduate Teaching Award, CWRU (2006)
Case School of Engineering Research Award, CWRU (2005)
Elected Overseas Fellow - Churchill College, University of Cambridge (2003)
Highly Cited Researcher (2001, 2003)
Leonard Case Jr. Professorship of Engineering (2000-2013)
CTSC Technical Educator Award (2000)
Institute of Metals (U.K.) Charles Hatchett Award (1999)
ASM Research Silver Medal (1997)
International Site Visit Panel Member - Ministry of University Affairs, Thailand (1996)
Fellow - ASM International (1995)
Who's Who in the World Listing (1995-Present)
Nominee - John S. Diekhoff Award for Graduate Teaching, CWRU (1994, 2006)
SAE Ralph R. Teetor Educational Award (1992)
Gordon Conference on Physical Metallurgy Speaker (1992, 2015), Discussion Leader (1994), Co-Vice Chair (1998), Co-Chair (2000)
American Men and Women of Science Listing (1991-Present)
Nominee - Carl F. Wittke Award for Undergraduate Teaching, CWRU (1991, 2000)
Nominee - Mortarboard Outstanding Professor of the Year, CWRU (1991)
Nominee - τΒΠ Professor of the Year, CWRU (1990, 2007)
1989 Presidential Young Investigator - National Science Foundation (1989-94)
ASM Bradley Stoughton Award for Young Teachers (1989)
ALCAN Postdoctoral Fellow - University of Cambridge (1985-86)
N.A.T.O./NSF Postdoctoral Fellowship in Science - University of Cambridge (1984-85)
HERTZ Foundation Fellowship - Carnegie Mellon University (1981-83)
ALLEGHENY INT'L Fellowship - Carnegie Mellon University (1979-81)
ASM Metallurgical Scholar - Carnegie Mellon University (1979)

CONFERENCE ORGANIZATION (45)

TMS-AIME Topical Symposium - Micromechanisms in Composites - Phoenix TMS-AIME Meeting, Spring, 1987.

Program Committee - ICCI-II - International Conference on Composite Interfaces, Summer, 1988.

International Advisory Committee - ICCI-III, Summer, 1990.

NSF-PYI Workshop "Future Problems in Mechanics/Materials", Summer, 1993.

International Conference on Structural Intermetallics - ISSI-I, Co-Editor and Program Committee, Summer, 1993.

Intermetallic Matrix Composites - III, Co-Editor, MRS, Spring, 1994.

International Advisory Committee - International Conference on Environmental Effects on Materials, China, Summer, 1994

TMS-AIME Topical Symposium - Intrinsic and Extrinsic Mechanisms in MMCs, Las Vegas TMS-AIME Meeting, Spring, 1995.

Layered Materials for Structural Applications - I, Co-Editor, MRS, Spring, 1996.

Microscopy of Composites Materials III, International Advisory Committee, Oxford, U.K., Spring, 1996.

Microscopy of Composites Materials IV, International Advisory Committee, Oxford, U.K., Spring, 1998.

Physical Metallurgy Gordon Conference-Co-Vice Chair, Summer, 1998

ASM/TMS Topical Symposium, Research and Development Efforts on MMCs, Nashville, TN, Spring, 2000.

Microscopy of Composite Materials V, International Advisory Committee, Oxford, U.K., Spring, 2000.

Physical Metallurgy Gordon Conference, Co-Chair, Summer, 2000.

High Pressure 2000, Organizing Committee, Slavyanogorski, Ukraine, Fall, 2000.

International Conference on Structural Intermetallics – ISSI-III, Fall, 2001.

International Conference on Fracture – ICF-10, MMC Session, Fall, 2001.

Microscopy of Composite Materials VI, International Advisory Committee, Oxford, U.K., Spring, 2002.

TMS-AIME International Symposium on Creep and Fatigue in MMCs, Seattle, WA, TMS-AIME Meeting, Spring, 2002.

TMS International Symposium on Mechanisms and Mechanics of Fracture, Columbus, OH, TMS Meeting, Fall, 2002.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2003.

ASM/TMS International Symposium on Affordable MMC's for High Performance Applications, Chicago, IL, Fall, 2003.

ASM/TMS Symposium on Structure-Property Relationships in High Performance Ferrous Based Systems with Composite-like Structures, Chicago, IL, Fall, 2003.

TMS Symposium on Mechanical Behavior of Body-Centered Cubic (BCC) Metals and Alloys, New Orleans, LA, Fall, 2004.

Workshop on X-Ray Tomography, Churchill College, Univ. Cambridge, Cambridge, U.K., Spring, 2005.

EUROMAT 2005/TMS Symposium on BMG, Prague, Czech Republic, Fall, 2005.

TMS/ASM International Symposium on Fracture of Multi-component Systems, Pittsburgh, PA, Fall, 2005.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2005.

ASM/TMS International Symposium on Advanced Metallic Composites and Alloys for High Performance Applications, Orlando, FLA, Spring 2007.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2007.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2009.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2011.

Composites at Lake Louise, Organizing Committee, Lake Louise, Canada, Fall, 2013.

Engineering Foundation Conf-Beyond Ni-Based Superalloys II, UK, Summer, 2016.

Intermetallic-Based Alloys: From Fundamentals to Applications, MRS, Fall, 2016.

Additive Manufacturing of Metals II: Fatigue and Fracture, 2018 TMS, Spring, 2018.

Advances in Intermetallic-Based Alloys for Structural and Functional Applications, MRS, Fall, 2018.

Beyond Nickel-Based Superalloys III, Nara, Japan, June, 2019.

ICMAT 2019 – 10th International Conference on Materials for Advanced Technologies, Singapore, June 2019.

Additive Manufacturing of Metals III: Fatigue and Fracture, 2019 TMS, Spring, 2019.

World Congress on High Entropy Alloys (HEA 2019), Fall 2019.

Additive Manufacturing of Metals III: Fatigue and Fracture, 2020 TMS, Spring, 2020.

6th International Workshop on Titanium Aluminides, GE Global, Fall 2020.

Additive Manufacturing of Metals IV: Fatigue and Fracture, 2021 TMS, Spring, 2021.

Additive Manufacturing of Metals V: Fatigue and Fracture, 2022 TMS, Spring, 2022.

BOOKS, BOOK CHAPTERS, MAJOR REVIEWS (25)

Future Problems in Mechanics and Materials, (J.J. Lewandowski, ed.), UCSD-IMM, 1993.

Structural Intermetallics I-ISSI, (R. Darolia, J.J. Lewandowski, C.T. Liu, P.L. Martin, D.B. Miracle and M.V. Nathal, eds.), TMS, Warrendale, PA, 1993.

Intermetallic Matrix Composites III, (J.A. Graves, R.R. Bowman, and J.J. Lewandowski, eds.), MRS, Vol. 350, Pittsburgh, PA, 1994.

Intrinsic and Extrinsic Fracture Mechanisms in Inorganic Composites, (J.J. Lewandowski and W.H. Hunt, Jr., eds.), TMS, Warrendale, PA, 1995.

Layered Materials for Structural Applications - I, (J.J. Lewandowski, C.H. Ward, M.R. Jackson, and W.H. Hunt, Jr., eds.), MRS, Pittsburgh, PA, 1996.

"Mechanical Behavior of Laminated Metal Composites", D.R. Lesuer, C.K. Syn, O.D. Sherby, J. Wadsworth, J.J. Lewandowski, W.H. Hunt, Jr., Int'l Matl's Rev., 41, pp. 169-197, 1996.

"Fracture and Fatigue of Composites", J.J. Lewandowski and P.M. Singh, ASM Metals Handbook, ASM International, Materials Park, OH, Vol. 19, pp. 895-904, 1996.

"Effects of Hydrostatic Pressure on Mechanical Behavior and Deformation Processing of Matl's", J.J. Lewandowski and P. Lowhaphandu, Int'l Matl's Rev., 43 (4), pp. 145-188, 1998.

"Fracture and Fatigue of Particulate Composites", J.J. Lewandowski, in Comprehensive Composite Materials (A. Kelly and C. Zweben, eds.), Vol. 3 – Metal Matrix Composites (T.W. Clyne, ed.), Elsevier, pp. 151-187, 2000.

Mechanisms and Mechanics of Fracture: Symposium in Honor of Prof. J.F. Knott (W.O. Soboyejo, J.J. Lewandowski, R.O. Ritchie, eds.), TMS, Warrendale, PA, 2002.

Affordable MMC: for High Performance Applications, (A.B. Pandey, K. L. Kendig, J.J. Lewandowski, eds.), TMS, Warrendale, PA, 2003.
"Hydrostatic Extrusion of Metals and Alloys", J.J. Lewandowski and A. Awadallah, ASM Metals Handbook, ASM International, Materials Park, OH, Vol. 14A, pp. 440-447, 2005.

"Forging of Discontinuously Reinforced Aluminum Composites", A. Awadallah and J.J. Lewandowski, ASM Metals Handbook, ASM, Materials Park, OH, Vol. 14A, pp. 366-373, 2005.

"Brittle Fracture", J.J. Lewandowski, Mc-Graw Hill Encyclopedia of Science & Technology, Mc-Graw Hill, NY, NY, 2006.

"MMCs: Types, Reinforcement, Processing, Properties and Applications", T.S. Srivatsan and J.J. Lewandowski, in Advanced Structural Matl's–Properties, Design Optimization and Application, (W.O Soboyejo and T.S. Srivatsan, eds.), CRC Press, Boca Raton, FLA, pp. 275-357, 2006

"X-ray Tomography of Cracks and Crack Growth". P.J. Withers and J.J. Lewandowski, Materials Science and Technology, Volume 22, 2006, pp. 1009-1098, 2006.

"Mechanical Behavior of Metallic Glasses and Applications", M.Li, J. Eckert, L. Kecskes, and J.J. Lewandowski, Focus Issue in Journal of Materials Research, 22(2), pp. 255- 556, 2007.

"Mechanical Properties of Bulk Metallic Glasses", R. Yavari, J.J. Lewandowski, and J. Eckert, Special Issue in MRS Bulletin, 32(8), pp. 635-638, 2007.

"Modern Fracture Mechanics", J.J. Lewandowski, Special Issue of Philosophical Magazine in Honour of Sir Alan H. Cottrell, Phil .Mag., 93(28-30), pp. 3893-3906, 2013.

"Fracture and Fatigue of Wires and Cables Used in Biomedical Applications", J. Gbur and J.J. Lewandowski, International Materials Reviews, 61(4), pp. 231-314, 2016.

"Properties of Discontinuously Reinforced MMCs and Laminates". H.A. Hassan and J.J. Lewandowski, Reference Module in Materials Science and Engineering, (Saleem Hashmi, ed.), Elsevier, Oxford, pp. 1-46, 2016.

"Additive Manufactured Metals - A Review of Mechanical Properties, J.J. Lewandowski and M. Seifi, Annual Review of Materials Research, pp. 151-186, 2016.

"Fracture Toughness and Fatigue of Particulate MMCs", H.A. Hassan and J.J. Lewandowski, in Comprehensive Composite Materials (C. Zweben, ed.) – Vol. 3 – Metal Matrix Composites, (T.W. Clyne, ed.), Elsevier, pp. 1-52, 2017.

"Fatigue Behavior of High Entropy Alloys: A Review", Chen, P.Y., Lee, C., Wang, S.Y., Seifi, M., Lewandowski, J.J., Dahmen, K.A., Jia, H., Xie, X., Chen, B.L., Yeh, J.W., Tsai, C.W., Yuan, T., and Liaw, P.K., Science China Technological Sciences, 2017.

"A Critical Review on Bulk Metallic Glasses as Structural Materials for Cardiovascular Stent Applications", Jafary-Zadeh, M., Kumar, G.P., Branicio, P.S., Seifi, M., Lewandowski, J.J., and Cui, F. (2018). Journal of Functional Biomaterials, 9(1), https://doi.org/10.3390/jfb9010019.

JOHN J. LEWANDOWSKI – PUBLICATIONS (350)

1980

1. Lewandowski, J.J., and Thompson, A.W. (1980). "The Effect of Austenite Stability on the Sustained-Load Cracking of Stainless Steels in One Atmosphere Hydrogen", Hydrogen Effects in Metals, Proc. Third Int'l. Conf. on Hydrogen, (I.M. Bernstein and A.W. Thompson, eds.), TMS-AIME, Warrendale, PA, pp. 629-37.

1981

2.Christodoulou, L., Stevens, M.F., Lewandowski, J.J., Bernstein, I.M., and Thompson, A.W. (1981). "Studies in Microstructural Effects in Hydrogen Embrittlement of Steels", Environmental Degradation of Engineering Materials, Proc. Third Int'l. Conf. on Environmental Degradation of Engineering Materials, (M.R. Louthan, Jr., R.P. McNitt, and R.D. Sisson, Jr., eds.), Va. Tech. Printing, Blacksburg, VA, pp. 161-75.

1983

3.Lewandowski, J.J. (1983). "Hydrogen Effects on Cleavage Fracture in Fully Pearlitic 1080 Steel", Ph.D. Thesis, Carnegie-Mellon University.

1984

4.Lewandowski, J.J., and Thompson, A.W. (1984). "Microstructural Effects on the Cleavage Fracture Stress in Fully Pearlitic 1080 Steel", - Advances in Fracture Research ICF6, Vol. 2, (S.R. Valluri, D.M.R. Taplin, P. Rama Rao, J.F. Knott, R. Dubey, eds.), Pergamon Press, pp. 1515-1522.

1985

5.Lewandowski, J.J., and Knott, J.F. (1985). "Microstructural Effects on Flow Localization in 7XXX Al Alloys", Strength of Metals and Alloys - ICSMA 7, Pergamon Press, Vol. 2, pp. 1193-1200.

6.Ellis, M.B.D., Lewandowski, J.J., and Knott, J.F. (1985). "Impurity Effects on Sustained Load Cracking of 2¼ Cr - 1 Mo Steel", Strength of Metals and Alloys - ICSMA 7, Pergamon Press, Vol. 2, pp. 1087-1194.

1986

7.Alexander, D.J., Lewandowski, J.J., and Thompson, A.W. (1986). "Yielding and Work Hardening Effects in Notched Bend Bars", J. Mech. Phys. Solids, 34, pp. 433-454.

8.Lewandowski, J.J., and Thompson, A.W. (1986). "Microstructural Effects on Ductility in Fully Pearlitic Steels", Met. Trans. A, 17A, pp. 461-472.

9.Lewandowski, J.J., and Thompson, A.W. (1986). "Microstructural Control of the Cleavage Fracture Stress in Fully Pearlitic Steels", Met. Trans. A, 17A, pp. 1769-1786.

10.Lewandowski, J.J., Ellis, M.B.D., and Knott, J.F. (1986). "Effects of Impurity Level and Test Environment on Sustained Load Cracking of 2¼ Cr - 1 Mo Steel", Fracture Control of Engineering Structures - ECF 6, (H.C. Van Elst and A. Bakker, eds.), EMAS, Amsterdam, Vol. 3, pp. 1905-1915.

11.Lewandowski, J.J., and Thompson, A.W. (1986). "Hydrogen Effects on Cleavage Fracture in Fully Pearlitic Eutectoid Steel", Fracture Control of Engineering Structures - ECF-6, (H.C. Van Elst and A. Bakker, eds.), EMAS, Amsterdam, Vol. 3, pp. 1985-1995.

1987

12.Lewandowski, J.J., and Thompson, A.W. (1987). "Modelling Cleavage Fracture in Fully Pearlitic Microstructures", Acta Met., 35, pp. 1453-1462.

13.Lewandowski, J.J., Hippsley, C.A., Ellis, M.B.D., and Knott, J.F. (1987). "Impurity Effects on Sustained Load Cracking of 2¼ Cr-1 Mo Steels: I Crack Initiation", Acta Met., 35, pp. 593-609.

14.Lewandowski, J.J., Hippsley, C.A., Kohler, V., and Knott, J.F. (1987). "Impurity Effects on Sustained-Load Cracking of 2¼ Cr-1 Mo Steels: II Crack Propagation", Acta Met., 35, pp. 2081-2091.

15.Lewandowski, J.J., Kohler, V., and Holroyd, N.J.H. (1987). "Effects of Pb on Sustained Load Cracking of Al-Mg-Si Alloys at Ambient Temperatures", Matl's Sci. and Eng., 96, pp. 185-195.

16.Lewandowski, J.J., Liu, C, and Hunt, W.H. (1987). "Microstructural Effects on Fracture of SiC Particulate Reinforced 7XXX Aluminum Alloys", Powder Metallurgy Composites, (P. Kumar, K.M. Vedula, and A.M. Ritter, eds.), TMS-AIME, Warrendale, PA, pp. 117-39.

1988

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2019

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2021

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350. Bindas, E.B., Kim, J., Willard, M.A., and Lewandowski, J.J. (2021). "Effect of Temperature, Strain Rate, and Axial Strain on Densification of Direct Powder Forged – Al-SiCp Metal Matrix Composites", Journal of Materials Processing Technology, submitted.
TOTAL: 350

JOHN J. LEWANDOWSKI-TECHNICAL PRESENTATIONS (1051)

****Denotes Invited Lecture**

1980

1."Effects of Austenite Stability on Fracture Behavior of Austenitic Stainless Steels in Gaseous Hydrogen", J.J. Lewandowski, A.W. Thompson and I.M. Bernstein, Fall Meeting, TMS-AIME, Pittsburgh, PA, October 8, 1980.

1981

2."Studies on Microstructural Effects on Hydrogen Embrittlement of Steels", L. Christodoulou, M.F. Stevens, J.J. Lewandowski, A.W. Thompson and I.M. Bernstein, Proceedings on Environmental Degradation of Engineering Materials, Blacksburg, VA, September 22, 1981.

1982

3."Yielding Behavior of Notched Bend Bars", J.J. Lewandowski, D.J. Alexander, A.W. Thompson and I.M. Bernstein, Fall Meeting, TMS-AIME, St. Louis, MO, October 25, 1982.

4."Hydrogen Effects on Cleavage Fracture of Pearlitic 1080 Steel", J.J. Lewandowski and A.W. Thompson, Fall Meeting, TMS-AIME, St. Louis, MO, October 28, 1982.

1983

5."Hydrogen Effects on Fracture of Pearlitic 1080 Steel", J.J. Lewandowski and A.W. Thompson, Fall Meeting, TMS-AIME, Philadelphia, PA, October 3, 1983.

1984

6.**"Cleavage Fracture in Pearlitic Steels", J.J. Lewandowski, University of Cambridge, Department of Metallurgy and Materials Science, Cambridge, U.K., April 12, 1984.

7."Microstructural Effects on the Cleavage Fracture Stress in Fully Pearlitic 1080 Steel", J.J. Lewandowski and A.W. Thompson, ICF-6, New Delhi, India, December 5, 1984.

1985

8."Microstructural Effects on Flow Localization in 7XXX Al Alloys", J.J. Lewandowski and J.F. Knott, ICSMA-7, Montreal, Canada, August 12, 1985.

9."Impurity Effects on Sustained Load Cracking of 2¼ Cr - 1 Mo Steel", J.J. Lewandowski, M.B.D. Ellis, and J.F. Knott, ICSMA-7, Montreal, Canada, August 16, 1985.

1986

10."Impurity Effects on Sustained Load Cracking of 2¼ Cr - 1 Mo Steel at Elevated Temperatures", J.J. Lewandowski, M.B.D. Ellis, and J.F. Knott, Spring Meeting, TMS-AIME, New Orleans, LA, March 4, 1986.

11.**"Microstructural Effects on Cleavage in Fully Pearlitic Eutectoid Steel", J.J. Lewandowski and A.W. Thompson, Spring Meeting, TMS-AIME, New Orleans, LA, March 4, 1986.

12."Hydrogen Effects on Cleavage Fracture in Fully Pearlitic Eutectoid Steel", J.J. Lewandowski and A.W. Thompson, ECF-6, Amsterdam, Netherlands, June 19, 1986.

13."Impurity Effects on Sustained Load Cracking of 2¼ Cr - 1 Mo Steel at High Temperatures", J.J. Lewandowski, M.B.D. Ellis, and J.F. Knott, ECF-6, Amsterdam, Netherlands, June 20, 1986.

14.**"Micromechanisms of Fracture-Applications of Blunt Notched Specimens", J.J. Lewandowski, ALCOA Research Laboratory Invited Seminar, ALCOA Center, PA, July 28, 1986.

15."Impurity Effects on Creep Crack Propagation in 2¼ Cr - 1 Mo", J.J. Lewandowski, M.B.D. Ellis, and J.F. Knott, Fall Meeting, ASM Materials Week '86, Orlando, FL, October 6, 1986.

16."Intergranular Slow Crack Growth in Al-Mg-Si Alloys", J.J. Lewandowski and N.J.H. Holroyd, Fall Meeting, ASM Materials Week '86, Orlando, FL, October 6, 1986.

1987

17."Microstructural Effects on Fracture of P/M 7XXX Series Aluminum Alloy Matrix SiC Particulate Reinforced Composites", J.J. Lewandowski, C. Liu, and W.H. Hunt, Jr., Spring Meeting TMS-AIME, Denver, CO, February 24, 1987.

18."Microstructural Effects on Fracture of P/M 7XXX Composites, C. Liu and J.J. Lewandowski, 1987 Northeast Regional Meeting - TMS-AIME, May 27-29, Stevens Institute of Technology, Hoboken, NJ, May 28, 1987.

19.**"Fracture of Nb-Nb Silicide Composites-Ductile Phase Toughening", J.J. Lewandowski, Wright Patterson Air Force Base Invited Seminar, Dayton, OH, Sept. 11, 1987.

20."Microstructural Effects on Fracture of 7XXX SiC Composites", C. Liu and J.J. Lewandowski, Fall Meeting TMS-AIME, Cincinnati, OH, October 12, 1987.

21.**"Micromechanisms of Fracture in Particulate Reinforced Composites", J.J. Lewandowski, Los Alamos National Lab, Los Alamos, NM., Invited Seminar, October 18, 1987.

22.**"Micromechanisms of Fracture in Particulate Reinforced Composites", J.J. Lewandowski, Sandia National Laboratory Technical Seminar, Livermore, CA, October 21, 1987.

23."Effects of Pb on Sustained Load Cracking of Al-Mg-Si Alloys", Y. S. Kim, N. J. H. Holroyd and J. J. Lewandowski, Fall Meeting TMS-AIME, Cincinnati, OH, October 12, 1987.

24."Fracture of Nb-Si Alloys", J.J. Lewandowski, 1987 High Temperature Materials Workshop, Dayton, OH, October 23, 1987.

25.**"Impurity Effects on Stress Relief Cracking in 2¼ Cr-1 Mo Steels", J.J. Lewandowski, David Taylor Naval Ship R&D Center, Annapolis, MD, November 24, 1987.

26.**"Mechanisms of Deformation and Fracture in Composites", J.J. Lewandowski, NASA Langley Research Lab, Hampton, VA, November 25, 1987.

1988

27."Fracture Mechanisms in Discontinuous Composites", J.J. Lewandowski, 10th Annual Meeting Discontinuous Reinforced Composites, Park City, UT, January 6, 1988.

28."Micromechanisms of Fracture in Al-SiC", J.J. Lewandowski, URI Winter Study Group, Santa Barbara, CA, January 6-9, 1988.

29.**"Micromechanisms of Fracture in MMC's", J.J. Lewandowski, Invited Lecture - Special Topical Symposia, Spring Meeting TMS-AIME, Phoenix, AZ, January 27, 1988.

30.**"Pb Induced Solid Metal Embrittlement", J.J. Lewandowski, Invited Seminar, Brush Wellman Inc., Cleveland, OH, February 25, 1988.

31."Microstructural Effects on Nb-Nb Silicide Composite Properties", J.J. Lewandowski, D. Dimiduk, W. Kerr, and M.G. Mendiratta, Spring Meeting MRS - Reno, NV, April 8, 1988.

32."Microstructures and Phase Relationships in Nb-Nb_5-Si_3 *In-Situ* Composites", M. Mendiratta, D. Dimiduk, and J.J. Lewandowski, MRS Spring Meeting, Reno, NV, April 9, 1988.

33.**"Microstructural Effects on Deformation and Fracture Micromechanisms in Metal Matrix Composites", Invited Lecture, Center for Composite Materials and Structures, Virginia Polytechnic University, Blacksburg, VA, May 4, 1988.

34.**"Effects of Reinforcement Distribution on MMC's", J.J. Lewandowski and W.H. Hunt, Jr., Symposium on Interfacial Phenomena in Composites, Processing, Characterization and Mechanical Properties, Salve Regina College, Newport, RI, June 1-3, 1988.

35."Effects of Matrix Microstructure and Interfaces on Monotonic Crack Propagation in SiC/Aluminum Alloy Composites", J.J. Lewandowski and C. Liu, ICCI-II, Case Western Reserve University, Cleveland, OH, June 13-17, 1988.

36."Processing and Mechanical Properties of Lightweight Structural Composites", J.J. Lewandowski, SAMPE Meeting, Dayton, OH, August 3, 1988.

37.**"Fracture of Aluminum Based Composites", J.J. Lewandowski, ALCOA Technical Center Special Seminar, ALCOA Center, PA, August 12, 1988.

38."Microstructural Effects on Fracture Micromechanisms in Lightweight MMC's", J.J. Lewandowski, 27th Annual Conference of Metallurgists, Montreal, Canada, August 28, 1988.

39.**"Pb Embrittlement of Al Alloys", J.J. Lewandowski, ALCAN Intl. Ltd., Seminar, Banbury, U.K., September 5, 1988.

40."Notch Effects on Fracture of Ni_3Al and Ni_3Al+B", P. Khadkikar, J.J. Lewandowski, and K.M. Vedula, Fall Meeting TMS-AIME, Chicago, IL, September 26, 1988.

41."Effect of Grain Boundary Carbides on the Ductility of an Fe-6.5 wt.% Si Alloy", A.W. Bhagwat, J.J. Lewandowski and G.M. Michal, Fall Meeting TMS-AIME, Chicago, IL, September 27, 1998.

42."Microstructural Effects on Composite Toughness", J.J. Lewandowski, Fall Meeting TMS-AIME, Chicago, IL, September 29, 1988.

43."Pb-Induced Solid Metal Embrittlement of Al-Mg-Si Alloys at Ambient Temperatures", Y.S. Kim, N.J.H. Holroyd, and J.J. Lewandowski, NACE Int'l. Conference on Environment Induced Cracking of Metals, Kohler, WI, October 4, 1988.

44.**"Microstructure and Stress State Effects on Fracture of Metal Matrix Composites", University of Pennsylvania, Department of Materials Science and Engineering, Philadelphia, PA, November 1, 1988.

45.**"Stress State Effects on Fracture of Composites", MTS Corporation, Minneapolis, MN, November 8, 1988.

46."Notch Effects on Tensile and Bend Properties of Ni_3Al", P. S. Khadkikar, J. D. Rigney, J.J. Lewandowski, and K. M. Vedula, MRS Meeting, Boston, MA, November 29, 1988.

47."Composite Materials Based on Nickel Aluminide Matrices", J.D. Rigney and J.J. Lewandowski, MRS Meeting, Boston, MA, December 1, 1988.

1989

48."Processing and Properties of Metal Matrix Composites", J.J. Lewandodwski, NASA Technical Review Meeting, NASA-CCDS, January 16, 1989.

49."Fracture of Metal/Alumina Interfaces", T. Spear and J.J. Lewandowski, Alumina Workshop, Case Western Reserve University Cleveland, OH, January 26, 1989.

50."Pressure Effects on Fracture of Particulate Reinforced Metal Matrix Composites", D.S. Liu and J.J. Lewandowski, Spring TMS-AIME Meeting, Las Vegas, NV, February 28, 1989.

51.**"Microstructural Effects on Fracture in Al-Based Metal Matrix Composites", J.J. Lewandowski, Wright Patterson Air Force Base, Dayton, OH, March 17, 1989.

52."Microstructure and Particle Size Effects on Fracture of Metal Matrix Composites", C. Liu and J.J. Lewandowski, ICF-7, Houston, TX, March 20-24, 1989.

53.**"Effects of Microstructure and Stress State on Fracture in Metal Matrix Composites", J.J. Lewandowski, TMS Annual Meeting, Detroit, MI, May 1, 1989.

54.**"Use of Blunt Notch Specimens in Fracture Experiments", J.J. Lewandowski, University of Michigan, Department of Materials Science and Engineering, Ann Arbor, MI, May 2, 1989.

55.**"Interface Effects on Fracture in Particle Hardened Materials", J.J. Lewandowski, ALCOA Center Technical Seminar, ALCOA Center, PA, June 2, 1989.

56.**"Slow Crack Growth in Al-Mg-Si Alloys", J.J. Lewandowski and N.J.H. Holroyd, ALCAN Int'l, Banbury, U.K., July 19, 1989.

57."Hydrogen Effects on the Cleavage Fracture Stress of Pearlitic Steel", J.J. Lewandowski and A.W. Thompson, Fourth Int'l Conf. on Hydrogen, Jackson, WY, September 15, 1989.

58.**"Fracture of Al-Based Composites", J.J. Lewandowski, ALCAN Special Technical Meeting, Chicago, IL., September 26-28, 1989.

59."Effects of Pb on Fracture of Al-Mg-Si Alloys During Cyclic Loading", Y.S. Kim, N.J.H. Holroyd, and J.J. Lewandowski, Fall Meeting TMS-AIME, Indianapolis, IN, October 2, 1989.

60."Fracture Initiation and Growth Toughness in Metal Matrix Composites", M. Manoharan and J.J. Lewandowski, Fall Meeting TMS-AIME, Indianapolis, IN, October 2, 1989.

61."Effects of Microstructure on Al MMC Tested Under Low Levels of Hydrostatic Pressure", D.S. Liu, C. Liu, and J.J. Lewandowski, Fall Meeting TMS, Indianapolis, IN, October 2, 1989.

62."Fracture Toughness of Cu-Alumina Interfaces", T. Spear and J.J. Lewandowski, Fall Meeting TMS-AIME, Indianapolis, IN, October 2, 1989.

63."Crack Growth Studies in a 7XXX Series Aluminum Alloy Based Metal Matrix Composite", M. Manoharan and J.J. Lewandowski, Fall Meeting TMS, Indianapolis, IN, October 2, 1989.

64."Properties of Squeeze Cast Al-SiC Composites", T. Studer, J.J. Lewandowski and J.F. Wallace, ASM Special Symposia, Indianapolis, IN, October 4, 1989.

65."Fracture of Composites under Mixed Mode Loading Conditions", M. Manoharan and J.J. Lewandowski, ASM Special Symposia, Indianapolis, IN, October 4, 1989.

66.**"Fracture Toughness of Advanced Composites", 1989 High Temperature Materials Workshop, Wright Patterson Air Force Base, Dayton, OH, December 14-15, 1989.

1990

67.**"Effects of Superposed Pressure on Fracture of Composites", J.J. Lewandowski, UCSB Winter Study Group Meeting, UC Santa Barbara, Santa Barbara, CA, January 4, 1990.

68.**"Deformation and Fracture of Metal Matrix Composites", J.J. Lewandowski, The Ohio State University, Columbus, OH, February 9, 1990.

69.**"Effects of Stress State and Microstructure on Fracture of Metal Matrix Composites", J.J. Lewandowski, Michigan State University, East Lansing, MI, February 13, 1990.

70.**"Microstructure and the Fracture of Metal Matrix Composites", J.J. Lewandowski, Center for Applied Polymer Research, Case Western Reserve, Cleveland, OH, March 14, 1990.

71."Fracture Toughness of Nickel Aluminides", J.D. Rigney and J.J. Lewandowski, MRS Meeting, San Francisco, CA, April 19, 1990.

72."Fracture of Nickel Aluminide Composites", J.D. Rigney, J.J. Lewandowski, and K.M. Vedula, MRS Meeting, San Francisco, CA, April 20, 1990.

73.**"Deformation and Fracture of Al-Based Composites", J.J. Lewandowski, University of Michigan, Ann Arbor, MI, May 9-10, 1990.

74.**"Fracture of Discontinuous Composites", J.J. Lewandowski, AEROMAT, Long Beach, CA, May 21-24, 1990.

75.**"Microstructural Effects on Fracture of MMC's", J.J. Lewandowski, 15th Int'l Nathiagali Conference on Physics/Contemporary Needs, Nathiagali, Pakistan, June 17, 1990.

76.**"Fracture Toughness of Intermetallics & Intermetallic Composites",J.J. Lewandowski, 15th Int'l Nathiagali Conf. on Physics/Contemporary Needs, Nathiagali, Pakistan, June 18, 1990.

77.**"Toughening of Brittle Materials", J.J. Lewandowski, 15th Int'l Nathiagali Conf. on Physics and Contemporary Needs, Nathiagali, Pakistan, June 19, 1990.

78.**"Fracture of Pearlitic Steels", J.J. Lewandowski, 15th Int'l Nathiagali Conf. on Physics and Contemporary Needs, Nathiagali, Pakistan, June 20, 1990.

79.**"Effects of Superposed Pressure on Deformation of Metal Matrix Composites", J.J. Lewandowski, ALCAN Kingston R&D Center, Kingston, Canada, September 24, 1990.

80."Interfacial Segregation in Al Based Metal Matrix Composites", M. Strangwood, C.A. Hippsley, and J.J. Lewandowski, Fall Meeting TMS-AIME, Detroit, MI., October 9, 1990.

81."Influence of Superimposed Hydrostatic Pressure on Micromechanisms of Failure in Aluminum Matrix Composite Materials", R. Margevicius and J.J. Lewandowski, Fall Meeting TMS-AIME, Detroit, MI, October 10, 1990.

82."Low Cycle Fatigue Behavior of Aluminum Alloy Matrix Composites", C. Liu and J.J. Lewandowski, Fall Meeting TMS-AIME, Detroit, MI, October 10, 1990.

83."Fracture Behavior of Aluminum/Aluminum Matrix Composite Laminates", L. Yost Ellis and J.J. Lewandowski, Fall Meeting TMS-AIME, Detroit, MI, October 10, 1990.

84."Comparative Study of the Fracture Properties of Two Aluminum Composites", M. Manoharan and J.J. Lewandowski, Fall Meeting TMS-AIME, Detroit, MI, October 10, 1990.

85."Processing and Characterization of Nickel Aluminide Composites," J.D. Rigney and J.J. Lewandowski, Fall Meeting, TMS-AIME, Detroit, MI, October 10, 1990.

86."Fracture Toughness of Monolithic and Composite Nickel Aluminides", J.D. Rigney and J.J. Lewandowski, Fall Meeting, TMS-AIME, Detroit, MI, October 11, 1990.

87.**"Microstructure Effects on Deformation and Fracture of MMC's", J.J. Lewandowski, Second Int'l Ceramic Science and Technology Congress, Orlando, FL, November 13, 1990.

88."Ductile Phase Toughening of Silicides", J.D. Rigney and J.J. Lewandowski, Second Int'l. Ceramic Science and Technology Congress, Orlando, FL, November 13, 1990.

89."Laminated Composites with Improved Toughness", L. Yost Ellis and J.J. Lewandowski, Second Int'l. Ceramic Science and Technology Congress, Orlando, FL, November 14, 1990.

90."Fracture Toughness and Effects of Stress State on Fracture of Aluminides", J.J. Lewandowski and J.D. Rigney, MRS Meeting, Boston, MA, November 19, 1990.

91."Loading Rate Effects on Ductile Phase Toughening of Silicides", J.D. Rigney, J.J. Lewandowski, M. Mendiratta, and D. Dimiduk, MRS Mtg, Boston, MA, November 30, 1990.

1991

92."Low Cycle Fatigue Behavior of 2014 and 2014 + Al_2O_3 Composites", C. Liu and J.J. Lewandowski, Engineering Foundation Conference on Mechanical Fatigue of Advanced Materials, Santa Barbara, CA, January 17, 1991.

93.**"Effects of Stress State on Deformation and Fracture of MMC's", J.J. Lewandowski, High Temperature Materials Workshop, Wright Patterson Air Force Base, Dayton, OH, February 12-13, 1991.

94.**"Issues in Ductile Phase Toughening in Nb-Nb Silicide System", J.J. Lewandowski, High Temperature Matls Workshop, Wright Patterson AFB, Dayton, OH, February 12-13, 1991.

95."Low Cycle Fatigue Behavior of Aluminum Alloy Matrix Composites", C. Liu and J.J. Lewandowski, TMS-AIME Meeting, New Orleans, LA, February 19, 1991.

96.**"High Pressure Studies on Deformation and Fracture of Particulate Composites", J.J. Lewandowski, Department of Civil Engineering, Case Western Reserve University, Cleveland, OH, April 12, 1991.

97."Effects of Superposed Hydrostatic Stress on the Elastoplastic Behavior of Two-Phase Composites", H. Luo, R. Ballarini, and J.J. Lewandowski, ASME Applied Mechanics Conference, Columbus, OH, June 16-19, 1991.

98."Ductile Phase Toughening of Silicides", J.D. Rigney and J.J. Lewandowski, ICCM-VIII, Honolulu, HI, July 15-19, 1991.

99.**"Effects of High Pressure on Deformation and Fracture of Intermetallics and MMC's", J.J. Lewandowski, ICCM-VIII, Honolulu, HI, July 17, 1991.

100.**"Deformation and Fracture of MMCs", J.J. Lewandowski, DSIRO, Auckland, New Zealand, July 22, 1991.

101.**"Effects of High Pressure on Deformation and Fracture of Intermetallics and MMC's", J.J. Lewandowski, Department of Earth Sciences, Australian National University, Canberra, Australia, July 26, 1991.

102.**"Overview of Deformation and Fracture in MMCs", J.J. Lewandowski, Aeronautical Research Lab - Aircraft Materials Division, DSTO, Melbourne, Australia, July 29, 1991.

103.**"Overview of Deformation and Fracture in MMCs", J.J. Lewandowski, Dept. of Materials Science & Engineering, Monash University, Melbourne, Australia, July 29, 1991.

104.**"Pb-Induced Cracking in Al-Mg-Si Alloys", J.J. Lewandowski, ABB Components, Ludvika, Sweden, August 22, 1991.

105.**"Effects of Microstructure and Interfaces on Fracture of Laminated MMCs", J.J. Lewandowski, ARO Workshop on MMCs, Research Triangle Park, NC, August 25, 1991.

106."Residual Stresses in Aluminum Alloy Matrix Composites", C. Liu, J.J. Lewandowski, and G.M. Michal, TMS-AIME Meeting, Cincinnati, OH, October 21, 1991.

107."Processing and Properties of AZ91 Magnesium Matrix Reinforced with Silicon Carbide Particulate", G. Rozak, J.J. Lewandowski, and J.F. Wallace, TMS-AIME Meeting, Cincinnati, OH, October 21, 1991.

108."Environmental Sensitive Fracture of Al-Based Metal Matrix Composites", P.M. Singh and J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 21, 1991.

109."Laminated Composites with Improved Toughness", L. Ellis, T. Osman, and J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 21, 1991.

110."The Effect of Stress State on the Mechanical Behavior of NiAl", R.W. Margevicius and J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 23, 1991.

111.**"Effects of Hydrostatic Pressure on the Deformation and Fracture of Brittle Materials", J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 23, 1991.

112."Monte-Carlo Simulation of Lead-Induced Slow Crack Growth in Al-Mg-Si Alloys", P.M. Singh, N.J.H. Holroyd, J.J. Lewandowski, and J.T. Evans, TMS-AIME Mtg., Cincinnati, OH, October 23, 1991.

113."Processing and Properties of Nb_5Si_3/Nb Composites", J. Kajuch and J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 23, 1991.

114."Volume Fraction Effects on Ductile-Phase Toughening in *in-situ* Nb-Nb Silicide Composites", J.D. Rigney and J.J. Lewandowski, TMS-AIME Meeting, Cincinnati, OH, October 23, 1991.

115."Effects of Carbon Additions in the Mechanical Behavior of $MoSi_2$", S.A. Maloy, A.H. Heuer, J.J. Lewandowski, and J. Petrovic, TMS Meeting, Cincinnati, OH, October 24, 1991.

116.**"Processing and Properties of Silicide Composites", J.J. Lewandowski, J.D. Rigney, and J. Kajuch, Workshop on Silicides, Gaithersburg, VA, November 4, 1991.

117.**"Effects of Carbon Additions on $MoSi_2$", S.A. Maloy, J.J. Lewandowski, A.H. Heuer, and J.J. Petrovic, Workshop on Silicides, Gaithersburg, VA, November 4, 1991.

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118.**"Mechanical Testing Techniques for Composite Materials", J. J. Lewandowski, BP America, Warrensville Research Lab, Cleveland, OH, February 7, 1992.

119.**"Effects of Pressure on Deformation and Fracture of NiAl", J. J. Lewandowski, NASA Lewis Research Center, Cleveland, OH, February 26, 1992.

120."Environmental Effects on Fracture of Nb_5Si_3/Nb Composites", J. D. Rigney, P. M. Singh, and J. J. Lewandowski, TMS-AIME Meeting, San Diego, CA, March 1-4, 1992.

121."Effects of Pressure on Processing and Properties of Advanced Materials", A. L. Grow, S. Patankar, T. Osman, Y. Esmaeilpour, and J. J. Lewandowski, TMS-AIME Meeting, San Diego, CA, March 1-3, 1992.

122.**"Processing and Properties of Tough Silicides", J.J. Lewandowski, WRDC Workshop on High Temperature Materials, Dayton, OH, April 19, 1992.

123.**"Metal Matrix Composites Research at CMSS", J.J. Lewandowski, NASA-CCDS Annual Review, Cleveland, OH, May 13, 1992.

124.**"Structure Evolution and Property Enhancement by Advanced Processing of Dissimilar Matls", J.J. Lewandowski, NSF Workshop Adv. Matls, Washington, D.C., May 14, 1992.

125.**"Processing of Advanced Materials", J.J. Lewandowski, AFOSR/ONR Workshop on Processing, Aurora, NY, May 18, 1992.

126.**"Microstructural Effects on Fracture Micromechanisms in Advanced Metallic Matls, J.J. Lewandowski, Gordon Conf. Physical Metallurgy, Plymouth, NH, June 15, 1992.

127.**"Pressure Effects on Interfaces", J.J. Lewandowski, Los Alamos National Lab Workshop on Interfaces, Los Alamos, NM, August 4, 1992.

128.**"The Ductile to Brittle Transition in $MoSi_2$", J.J. Lewandowski, Los Alamos National Lab Workshop on $MoSi_2$, Los Alamos, NM, August 10, 1992.

129.**"Advanced Processing of Intermetallics", J.J. Lewandowski, Workshop on Advanced Processing of Titanium Aluminides", AGA Company, Cleveland, OH, August 12, 1992.

130."Aspects of Ductile Phase Toughening in *In-situ* Composites", J.D. Rigney, J. Kajuch, and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 2, 1992.

131."Processing and Properties of Tough Laminated Composites", T. Osman, W. Hunt, Jr., and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 2, 1992.

132."Non-Destructive Evaluation of Interface Strength", J. Zhang and J. J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 2, 1992.

133."Pressure-Induced Dislocations and Subsequent Flow in NiAl", R.W. Margevicius and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 2, 1992.

134."Pressure-Induced Ductility in NiAl", R.W. Margevicius and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 2, 1992.

135."A High Temperature-High Pressure Deformation and Processing Apparatus", P. Harwood, M. Costantino, and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 3, 1992.

136."Kinetic Model for Formation of Nb_5Si_3", J. Short, J. Kajuch, and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 3, 1992.

137."Dislocations and Flow in Single Crystal $MoSi_2$", S. Maloy, T.E. Mitchell, J.J. Lewandowski, and A. H. Heuer, TMS-AIME Meeting, Chicago, IL, November 3, 1992.

138.**"Modeling of Impurity Induced Slow Crack Growth in Al Alloys", J.J. Lewandowski, Jaffee Memorial Symposium on Clean Matls Technology, Chicago, IL, November 4, 1992.

139."Effects of Casting Condition and Hot Deformation Processing on A356 and A356-SiC Composites", G. Rozak, J. J. Lewandowski, and J.F. Wallace, TMS-AIME Meeting, Chicago, IL, November 5, 1992.

140."Effects of Interface Modification on Interface Strengths of Laminates", J. Zhang and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 5, 1992.

141."Hydrostatic Extrusion of 2014 and 6061 Composites", S. Patankar, R.W. Margevicius, and J.J. Lewandowski, TMS-AIME Meeting, Chicago, IL, November 5, 1992.

142."Processing and Properties of $MoSi_2$", S. Patankar and J.J. Lewandowski, MRS Meeting, Boston, MA, November 30, 1992.

143."Ductile Phase Toughened Silicides", J.D. Rigney, J. Kajuch, and J.J. Lewandowski, MRS Meeting, Boston, MA, November 30, 1992.

144."Effects of Pressure on Flow and Fracture of NiAl", R.W. Margevicius, I. Locci, and J.J. Lewandowski, MRS Meeting, Boston, MA, November 30, 1992.

145."Kinetic Model for Nb_5Si_3 Formation", J. Kajuch and J.J. Lewandowski, MRS Meeting, Boston, MA, November 30, 1992.

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146."Kinetic Model for Nb_5Si_3 Formation", J. Short, J. Kajuch, C. Liu, and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 22, 1993.

147."Processing and Properties of Nb_5Si_3/Nb Laminates", J. D. Rigney, J. Kajuch, and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 22, 1993.

148."Hybrid Composites for Aerospace Applications", T. M. Osman, W. Hunt, Jr., R. Bucci, and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 22, 1993.

149."Effects of Interface Modification on Aluminum Alloy/DRA Laminates", L. Y. Ellis, T. M. Osman, and J. J. Lewandowski, TMS-AIME Meeting, Denver, Co, February 22, 1993.

150."Layer Thickness Effects on Laminated Composites", T. M. Osman, L. Y. Ellis, W. H. Hunt, Jr., and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 22, 1993.

151."Effects of Confining Pressure on Fracture of CP-Mg", P. Harwood, M. Beeman, G. Rozak, and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 22, 1993.

152."Effects of Confining Pressure on Fracture of AZ91 and AZ91 Composites", P. Harwood, M. Beeman, G. Rozak, and J. J. Lewandowski, TMS Mtg, Denver, CO, February 22, 1993.

153."Evolution of Residual Stresses in MMCs", C. Liu, G. M. Michal, and J. J. Lewandowski, TMS-AIME Meeting, Denver, CO, February 24, 1993.

154."Processing and Properties of A356/20% SiC_p Composites", G. Rozak, J. J. Lewandowski, and J. F. Wallace, SAE Meeting, Detroit, MI, March 1, 1993.

155.**"Issues in Processing and Properties of MMCs", J.J. Lewandowski, ALCOA Technical Center, Pittsburgh, PA, March 1, 1993.

156.**"Issues in the Processing and Properties of Aluminum Alloys and MMCs", J.J. Lewandowski, DOE Workshop, Clearwater, FL, May 4, 1993.

157.**"Ductile Phase Toughening of Brittle Materials", J.J. Lewandowski, Wright Research and Development Center, Dayton, OH, May 12, 1993.

158.**"Optimizing the Properties of Al and Mg-Based MMCs", J.J. Lewandowski, NASA CCDS Annual Review, Cleveland, OH, May 25, 1993.

159."Effects of Stress State on Fracture of AZ91D Composites", G. Rozak, P. Harwood, M. Beeman, and J. J. Lewandowski, NASA CCDS Annual Review, Cleveland, OH, May 25, 1993.

160."Processing and Properties of AZ91D MMCs", G. Rozak, J. J. Lewandowski, and J. F. Wallace, NASA CCDS Annual Review, Cleveland, OH, May 25, 1993.

161."Effects of Processing and Stress State on Laminated Matls", NSF-PYI Workshop, UC San Diego Institute of Mechanics and Materials, San Diego, CA, July 5, 1993.

162."Processing & Properties MMCs",J.J. Lewandowski, ICCM-9, Madrid, Spain, July 14, 1993.

163.**"Opportunities in Processing and Properties of MMCs", J. J. Lewandowski, Department Civil Engineering and Matls, Universidad de Cantabria, Santander, Spain, July 23, 1993.

164."Effects of Processing on Properties of $MoSi_2$", D. Hardwick, P. Martin, S. Patankar, and J.J. Lewandowski, ISSI-I, Seven Springs, PA, September 26, 1993.

165."Effects of Pressure on Flow and Fracture of NiAl", R. W. Margevicius, J. J. Lewandowski, and I. Locci, ISSI-I, Seven Springs, PA, September 26, 1993.

166.**"Microstructural Effects on Mechanical Behavior of *In-Situ* Composites", J. J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 19, 1993.

167.**"Fracture Toughness of Intermetallics and Intermetallic Composites", J. D. Rigney and J.J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 19, 1993.

168."Effects of Heat Treatment and Reinforcement Size on Reinforcement Fracture During Tension Testing of a SiC_p Discontinuously Reinforced Aluminum Alloy", P.Singh and J.J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 18, 1993.

169."Effects of Reinforcement Size on The High Cycle Fatigue Behavior of Mg-Based MMCs", A. Vaidya and J. J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 18, 1993.

170."Effects of Laminate Thickness on Nb_5Si_3/Nb Composites", J. Short, J. Kajuch, and J. J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 18, 1993.

171."New Techniques in Processing of Discontinuously Reinforced Aluminum DRA Composites", E. J. Hilinski, J. J. Lewandowski, T. J. Rodjom, and P. T. Wang, TMS-AIME Fall Meeting, Pittsburgh, PA, October 18, 1993.

172."Influence of Hydrostatic Extrusion on the Tensile Properties of Discontinuously Reinforced Aluminum", A. L. Grow, S. Patankar, and J. J. Lewandowski, TMS-AIME Fall Meeting, Pittsburgh, PA, October 20, 1993.

173.**"Effects of Stress State on Deformation and Fracture", J.J. Lewandowski, Case Western Reserve University, Cleveland, OH, November 15, 1993.

174."The Temperature and Strain Rate Dependence of the Flow Stress in $MoSi_2$ Single Crystals", S.A. Maloy, T.E. Mitchell, A.H. Heuer, J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 29, 1993.

175."Environmental Effects on Fracture of *In-Situ* Nb_5Si_3/Nb Composites", J.D. Rigney, P.M. Singh, and J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 2, 1993.

1994

176.**"Factors Affecting Damage Evolution in Commercially Produced MMCs", J.J. Lewandowski, 6th Annual MMC Working Group, Park City, UT, February 1, 1994.

177.**"Properties and Behavior of Laminated MMCs", J.J. Lewandowski, 6th Annual MMC Working Group, Park City, UT, February 1, 1994.

178.**"Effects of Pressure on Deformation and Fracture of Advanced Materials", J.J. Lewandowski, Dept Mechanical Engineering, Johns Hopkins Univ., February 25, 1994.

179.**"Cyclic Work Hardening Behavior of Discontinuously Reinforced Aluminum Alloys", J.J. Lewandowski, TMS-AIME Annual Meeting, San Francisco, CA, March 1, 1994.

180."Processing and Properties of Nb_5Si_3/Nb Laminates", J.W. Short, J. Kajuch, and J.J. Lewandowski, MRS Spring Meeting, San Francisco, CA, April 6, 1994.

181.**"Effects of Pressure on Deformation and Fracture of Advanced Materials", J.J. Lewandowski, Dept Mechanical Engineering, University of Akron, April 29, 1994.

182."Development of a Densification Model for DRA", E.J. Hilinski, J.J. Lewandowski, T.J. Rodjom, P.T. Wang, International Conf. on Powder Metallurgy, Toronto, Canada, May 9, 1994.

183."Flow Behavior and Stress Evolution Modeling for DRA Composites", E.J. Hilinski, J.J. Lewandowski, T.J. Rodjom, P.T. Wang, Int'l. Conf. Powder Metallurgy, Toronto, May 9, 1994.

184."Laminated MMCs with Improved Properties", T.M. Osman, J.J. Lewandowski, and W.H. Hunt, Jr., International Conf. on Powder Metallurgy, Toronto, Canada, May 9, 1994.

185."Laminated MMCs with High Toughness", T.M. Osman and J.J. Lewandowski, AEROMAT, Los Angeles, CA, June 7, 1994.

186.**"Advanced Lightweight Composite Materials", J.J. Lewandowski, OAI Educational Lecture, Cleveland, OH, June 24, 1994.

187.**"Processing and Properties of Laminated Materials with High Toughness", J.J. Lewandowski, GE-CRD Lab, Schenectady, NY, July 18, 1994.

188."DRA Laminates with Improved Performance", T.M. Osman, J.J. Lewandowski, C. Syn, D. Leseur, and W.H. Hunt, Jr., Fourth Int'l Conf. on Al. Alloys, Atlanta, GA, September 14, 1994.

189."Factors Affecting Toughness in Brittle Materials", J.J. Lewandowski, TMS-AIME Fall Meeting, Rosemont, IL, October 5, 1994.

190.**"Effects of SiCp Reinforcement Size on Strength, Ductility, and High Cycle Fatigue of AZ91D Mg", J.J. Lewandowski, Ford Motor Company, Dearborn, MI, October 13, 1994.

191.**"Microstructural Effects on Deformation and Fracture of Layered Materials", J.J. Lewandowski, Dept Matls Sci Eng., Univ. Michigan, Ann Arbor, MI, October 14, 1994.

192.**"Fracture of Refractory Metal Intermetallic Matrix Composites", J.J. Lewandowski, Wright State University, Dayton, OH, October 20, 1994.

1995

193."Hydrogen Embrittlement", J.J. Lewandowski, IMF Educational Day, Harmarville, PA, January 26, 1995.

194.**"Damage Evolution in DRA Materials", P.M. Singh and J.J. Lewandowski, TMS Annual Meeting, Las Vegas, NV, February 13, 1995.

195.**"Factors Affecting the Toughness of Extrinsically Toughened Materials", J.J. Lewandowski, J. Short and J.D. Rigney, TMS Meeting, Las Vegas, NV, February 13, 1995.

196."Extrinsic Toughening of Porous Steels", P. Lowhaphandu, J.J. Lewandowski, and J.D. Rigney, TMS Annual Meeting, Las Vegas, NV, February 13, 1995.

197."Toughness of DRA/Aluminum Alloy Laminates", T.M. Osman, J.J. Lewandowski, D. Leseur, C.K. Syn, and R. Riddle, TMS Annual Meeting, Las Vegas, NV, February 13, 1995.

198.**"Laminated DRA with High Toughness", J.J. Lewandowski, National Physical Laboratory", New Delhi, India, March 1, 1995.

199."Effects of SiCp Reinforcement Size on Hydrostatic Extrusion of MMC's", A.L. Grow and J.J. Lewandowski, SAE Meeting, Detroit, MI, March 6, 1995.

200.**"Processing and Properties of Laminated DRA", J.J. Lewandowski, Workshop on MMCs, IIS Bangalore, India, March 7, 1995.

201.**"Advanced Deformation and Fracture Tools", J.J. Lewandowski, CWRU Research Day, Case Western Reserve University, Cleveland, OH, April 28, 1995.

202."DRA Laminates with High Toughness", W.H. Hunt, Jr., J. Teply, R. Bush, T. Osman, and J.J. Lewandowski, AEROMAT 1995, Anaheim, CA, May 11, 1995.

203.**"Advanced Lightweight Structural Materials", J.J. Lewandowski, Alliance Machine Co., Alliance, OH, June 14, 1995.

204.**"Advanced Deformation and Fracture Tools in Analysis of Advanced Materials", J.J. Lewandowski, OAI/NASA, Cleveland, OH, June 16, 1995.

205."Toughness Enhancement in DRA for Aircraft Structural Applications", J.J. Lewandowski, OAI Interim Review, OAI, Cleveland, OH, July 12, 1995.

206."Layered DRA Produced via Spray Deposition", E.J. Lavernia, M. Wu, J.J. Lewandowski, and W.H. Hunt, Jr., Eng Fnd Conf. on Layered Materials, Davos, Switzerland, August 22, 1995.

207."Laminated DRA Systems with High Toughness", D. Leseur, B. Riddle, J.J. Lewandowski, and W.H. Hunt, Jr., Engineering Foundation Conference on Layered Materials, Davos, Switzerland, August 22, 1995.

208.**"Fracture and Fatigue Behavior of Toughened High Temperature Structural Materials", J.J. Lewandowski, NATO Workshop, Sesimbra, Portugal, September 21, 1995.

209.**"Microstructure and Stress State Effects on Fracture of Composites", J.J. Lewandowski, Department of Materials Science and Engineering, University of Cincinnati, Cincinnati, OH, October 13, 1995.

210."Deformation and Fracture of DRA Laminates", T.M. Osman, J.J. Lewandowski, D.R. Leseur, C.K. Syn, and R.A. Riddle, and J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, October 30, 1995.

211."Yield Point Behavior in NiAl", R.W. Margevicius and J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, October 30, 1995.

212."Effects of Test Temperature and Nb Layer Thickness on Fracture Behavior and Toughness of Nb_5Si_3/Nb Laminates", J. Short, J. Kajuch, and J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, October 30, 1995.

213.**"Microstructural Effects on the Toughness of High Temperature Materials", J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, October 30, 1995.

214."Environmental Effects on the Mechanical Properties of DRA Alloys", P.M. Singh and J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, Nov. 1, 1995.

215."A Densification and Flow Stress Evolution Constitutive Model for Powder Based DRA Materials", E.J. Hilinski, J.J. Lewandowski, and P.T. Wang, TMS-AIME Fall Meeting, Cleveland, OH, November 2, 1995.

216."Effects of Ductile Phase Toughening on the Fracture Behavior of Al/SiCp Composites", L. Ellis, J.J. Lewandowski, and W.H. Hunt, Jr., TMS-AIME Fall Meeting, Cleveland, OH, November 2, 1995.

217."Extrinsic Toughening of P/M Plain Carbon Steels by Copper Infiltration", P. Lowhaphandu and J.J. Lewandowski, TMS-AIME Fall Meeting, Cleveland, OH, November 2, 1995.

218.**"Aluminum MMC's- Research Programs, Issues and Future Directions", J.J. Lewandowski OAI Workshop, Cleveland, OH, November 2, 1995.

219.**"Toughening of Brittle and Semi-Brittle Materials", J.J. Lewandowski, Materials Science Lecture Series, California Institute of Technology, Pasadena, CA, December 6, 1995.

220.**"Fatigue and Fracture Behavior of Toughened High Temperature Structural Materials", J.J. Lewandowski, Japan Institute of Metals, Honolulu, Hawaii, December 14, 1995.

221.**"Laminated Metal Composites with High Strength and Toughness", J.J. Lewandowski, Japan Institute of Metals, Honolulu, Hawaii, December 15, 1995.

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222.**"Interface Effects on Fracture of DRA and DRA Laminates", J.J. Lewandowski, Intl Conference on Microscopy of Interfaces in MMCs, Oxford University, U.K., April 1, 1996.

223.**"Laminated Metal Composites-Fracture Toughness and Impact Properties", D.R. Leseur, J. Wadsworth, R.A. Riddle, C.K. Syn, J.J. Lewandowski, and W.H. Hunt, Jr., Spring MRS Meeting, San Francisco, CA, April 10, 1996.

224."Fracture and Fatigue Behavior of Toughened DRA", L.Y. Ellis, D.S. Liu, J.J. Lewandowski, and W.H. Hunt, Jr., Spring MRS Meeting, San Francisco, CA, April 10, 1996.

225.**"Microstructure and Stress State Effects on Fracture of Composite Materials", J.J. Lewandowski, Department of Materials Science and Engineering Seminar, University of Pittsburgh, Pittsburgh, PA, May 9, 1996.

226.**"Microstructure and Stress State Effects on Fracture of Composite Materials", J.J. Lewandowski, Department of Materials Science and Engineering Seminar, University of Virginia, Charlottesville, VA, May 16, 1996.

227.**"Microstructure Effects on Fracture Toughness of DRA", J.J. Lewandowski, AEROMAT Conference, Dayton, OH, June 6, 1996.

228."Effects of Stress State on Deformation and Fracture of Structural Materials", J.J. Lewandowski, ASME Mechanics and Materials Conference, Baltimore, MD, June 14, 1996.

229."Processing and Properties of Toughened DRA", J.J. Lewandowski, OAI Final Review, Cleveland, OH, July 16, 1996.

230.**"Processing and Property Studies on Advanced Materials", J.J. Lewandowski, TOSO SMD, Inc., Grove City, OH, July 19, 1996.

231."Fracture and Fatigue of Toughened DRA", J.J. Lewandowski, ALCOA Technical Center, ALCOA Center, PA, July 25, 1996.

232.**"Fatigue and Fracture of Toughened Materials", J.J. Lewandowski, AFOSR Workshop on High Temperature Structural Materials, Bar Harbor, MA, August 21, 1996.

233.**"Fatigue and Fracture of Toughened Materials", J.J. Lewandowski, TMS Fall Meeting, Cincinnati, OH, October 7, 1996.

234."Effects of Superimposed Pressure on Fracture of Structural Materials", P. Lowhaphandu and J. J. Lewandowski, TMS Fall Meeting, Cincinnati, OH, October 7, 1996.

235."Fatigue of Nb-Si *In-Situ* Composites", W. Zinsser and J.J. Lewandowski, TMS Fall Meeting Cincinnati, OH, October 7, 1996.

236.**"Effects of Interfaces on Fracture of Layered Materials", J.J. Lewandowski, TMS Fall Meeting, Cincinnati, OH, October 9, 1996.

237.**"Materials and Mechanics Issues in Heterogeneous Systems", J.J. Lewandowski, Boeing Commercial Aircraft, Seattle, WA, October 10, 1996.

238.**"Fracture and Fatigue of Structural Materials", J.J. Lewandowski, Biomechanics Group, Case Western Reserve University, Cleveland, OH, October 30, 1996.

239.**"Effects of Bonding Conditions on Mechanical Behavior of Laminates", J.J. Lewandowski, International Conference on Advances in Welding/Joining Techniques, Edison Welding Institute, Columbus, OH, November 7, 1996.

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240.**"Toughening and Fatigue Performance of Brittle and Semi-Brittle Structural Materials", J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, February 11, 1997.

241."Fatigue of Monolithic Nb and Nb-based *In-situ* Composites", W.A. Zinsser and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, February 11, 1997.

242."Fracture Toughness Testing of A.R.E.A. Grade B Hand Tool Steel", C.P. Lonsdale and J.J. Lewandowski, A.R.E.A. Spring Technical Conference, Chicago, IL, March 17, 1997.

243.**"Fracture and Fatigue Behavior of Composites", J.J. Lewandowski, Naval Research Lab, Washington, D.C., May 6, 1997.

244.**"Fracture and Fatigue of DRA and Toughened DRA", J.J. Lewandowski, AEROMAT, Williamsburg, VA, May 13, 1997.

245.**"Deformation Processing Issues Using Hydrostatic Extrusion for the Production of Intermetallics and Composites with Improved Performance", J.J. Lewandowski, ONR Materials Science Review, Woods Hole, MA, June 16, 1997.

246.**"Fracture Toughness and Fatigue of Bulk Metallic Glass", J.J. Lewandowski, ATI, Inc., Laguna Niguel, CA, June 19, 1997.

247.**"Fracture Toughness and Fatigue of BMG", J.J. Lewandowski, Department of Matl's Sci. and Engineering, California Institute of Technology, Pasadena, CA, June 20, 1997.

248.**"DRA: Strength, Ductility, Toughness and Fatigue Behavior", J.J. Lewandowski, Triton Systems, Inc., Chelmsford, MA, August 14, 1997.

249."Deformation and Fracture of Bulk Metallic Glass", P. Lowhaphandu, L. Ludrosky, and J.J. Lewandowski, TMS-AIME Fall Meeting, Indianapolis, IN, September 15, 1997.

250."Effects of Changes in Grain Size and Load Ratio, R, on Fatigue of Monolithic Nb and Nb Based Composites", W.A. Zinsser and J.J. Lewandowski, TMS-AIME Fall Meeting, Indianapolis, IN, September 17, 1997.

251."Frequency, Load Ratio Effects on Fatigue of Refractory Intermetallic Composites", W.A. Zinsser and J.J. Lewandowski, ISSI-II, Seven Springs, PA, September 22, 1997.

252."Fracture Toughness Testing of Thermite Welds in Rail Steel", C.P. Lonsdale and J.J. Lewandowski, International Symposium on Rail Steels, Indianapolis, IN, October 21, 1997.

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253."Effects of Annealing Treatments on Strength and Toughness of a Bulk Amorphous Metal", L. Ludrosky, P. Lowhaphandu, and J.J. Lewandowski, TMS-AIME Annual Meeting, San Antonio, TX, February 17, 1998.

254."Effects of Rolling Temperature and Reduction on Microstructure and Tensile Properties of P/M Mo", S.A. Zwonitzer, G.A. Rozak, and J.J. Lewandowski, TMS-AIME Annual Meeting, San Antonio, TX, February 18, 1998.

255.**"Microstructure Effects on Fatigue", J.J. Lewandowski, ASM Milwaukee Chapter Fatigue Symposium, Milwaukee, WI, April 22, 1998.

256.**"Surface Analysis of B_4C", J.J. Lewandowski, ALYN Corp., Irvine, CA, May 13, 1998.

257.**"Mechanical Behavior of Materials", J.J. Lewandowski, CWRU Reunion Day, Cleveland, OH, June 6, 1998.

258.**"Fracture and Fatigue of Nb-Based Intermetallic Composites", J.J. Lewandowski, WPAFB, Dayton, OH, July 15, 1998.

259.**"Fracture of BMGs", J.J. Lewandowski, WPAFB, Dayton, OH, July 15, 1998.

260.**"Mechanical Behavior of Nb-Si In-Situ Composites", J.J. Lewandowski, S. Solv'yev, and W.A. Zinsser, TMS-ASM Fall Meeting, Rosemont, IL, October 12, 1998.

261.**"Evolving Research and Development Directions in DRA", J.J. Lewandowski, ASM Materials Week, Rosemont, IL, October 12, 1998.

262.**"Effects of 6013 Layer Volume Fraction and Thickness on Fracture of 6013/6090/SiC/25p Laminates", J.D. Rigney, R.W. Bush, J. Teply, J.J. Lewandowski, C.K. Syn, and D.R. Lesuer, TMS-ASM Fall Meeting, Rosemont, IL, October 12, 1998.

263."Effects of Annealing Treatment on the Mechanical Behavior of Bulk Zr-Ti-Ni-Cu-Be", P. Lowhaphandu, L. Ludrosky, and J.J. Lewandowski, TMS-ASM Fall Meeting, Rosemont, IL October 12, 1998.

264."Effects of Stress Triaxiality on the Damage Evolution of Discontinuously Reinforced Composites", P. Lowhaphandu and J.J. Lewandowski, TMS-ASM Fall Meeting, Rosemont, IL October 14, 1998.

265.**"Factors Affecting the Toughness of Composites", J.J. Lewandowski, TMS-AMS Fall Meeting, Rosemont, IL, October 14, 1998.

266."Effects of Particle Morphology and Type on Fracture and Fatigue of DRA", J. Oviedo and J.J. Lewandowski, TMS-ASM Fall Meeting, Rosemont, IL, October 14, 1998.

267."Annealing Effects on Mechanical Behavior of Bulk Metallic Glass", S. Montgomery, P. Lowhaphandu, L. Ludrosky and J.J. Lewandowski, TMS-ASM Fall Meeting, Rosemont, IL, October 14, 1998.

268."Fracture and Fatigue of Refractory Metal Intermetallic Composites", S. Solv'yev, W. Zinsser, and J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 2, 1998.

269.**"Fracture/Fatigue of Refractory Metal Intermetallic Composites", J.J. Lewandowski, U.S.-Japan Workshop - Very High Temp Struct'l Matls, Honolulu, HI, December 9, 1998.

1999

270.**"Fracture and Fatigue of Refractory Metal Intermetallic Composites", J.J. Lewandowski, AFOSR Workshop, San Diego, CA, March 4, 1999.

271.**"Casting Activities at CWRU", J.J. Lewandowski, NSF Workshop, Washington, D.C., March 17, 1999.

272.**"Fracture and Fatigue of Bulk Metallic Glass", J.J. Lewandowski, Howmet Technical Center, Whitehall, MI, March 31, 1999.

273.**"Stress Corrosion Cracking of AISI 305, 410, and A325", J. Oviedo and J.J. Lewandowski, NACE Meeting, San Antonio, TX, April 24, 1999.

274.**"Flow, Fracture, and Fatigue of Composite Materials", J.J. Lewandowski, Department of Design and Manufacturing, Ain Shams University, Cairo, Egypt, April 26, 1999.

275."Structure-Property Relationships in Continuous Fiber Composites", C. Bowman and J.J. Lewandowski, NASA HI-TEMP Meeting, Cleveland, OH, May 5, 1999.

276.**"Advanced Testing Facilities for Deformation and Fracture Experimentation", J.J. Lewandowski, NIST, Gaithersburg, MD, June 7, 1999.

277."Effects of the Addition of Toughening Ligaments on the Fatigue of Composites", J.J. Lewandowski and P. Lowhaphandu, Fatigue '99, Beijing, China, June 11, 1999.

278.**"Fracture and Fatigue of Bulk Metallic Glass", P. Lowhaphandu and J.J. Lewandowski, IUMRS-ICAM '99, Beijing, China, June 17, 1999.

279.**"Fracture and Fatigue of Refractory Metal Intermetallic Composites", J.J. Lewandowski and P. Lowhaphandu, IUMRS-ICAM '99, Beijing, China, June 17, 1999.

280.**"Fracture and Fatigue of Bulk Metallic Glass", J.J. Lewandowski and P. Lowhaphandu, Workshop on Bulk Metallic Glass, Beijing, China, June 18, 1999.

281.**"Fracture and Fatigue of Refractory Metal Intermetallic Composites", J.J. Lewandowski, AEROMAT, Dayton, OH, June 23, 1999.

282.**"Fracture and Fatigue of DRA Composites", J.J. Lewandowski, AFOSR Composites Workshop, WPAFB, Dayton, OH, September 9, 1999.

283.**"Deformation Processing and Simulation", J.J. Lewandowski, U.S. Steel Research Labs, Monroeville, PA, September 27, 1999.

284.**"Microstructure and Stress State Effects on Fracture of Structural Materials", Staff Seminar, Carnegie-Mellon University, Pittsburgh, PA, September 28, 1999.

285."Deformation Processing and Simulation", J.J. Lewandowski, Timken Research Lab Visit, Case Western Reserve University, Cleveland, OH, September 30, 1999.

286.**"Deformation Processing and Simulation", J.J. Lewandowski, ALCOA Technical Center, ALCOA Center, PA, October 21, 1999.

287.**"Deformation Processing and Simulation", J.J. Lewandowski, USAMP Meeting, CWRU, Cleveland, OH, October 28, 1999.

288."Environmental Exposure Cracking Tests of AISI 305, 410 and Low Alloy Steel Bolts/Fasteners in Boiling Acidified Chloride Solutions", J.R. Oviedo and J.J. Lewandowski, TMS-AIME Fall Meeting, Cincinnati, OH, November 1, 1999.

289."Fracture Resistance of Zr-Ti-Ni-Cu-Be Bulk Metallic Glass", P. Lowhaphandu, L.A. Ludrosky, and J.J. Lewandowski, TMS-AIME Fall Meeting, Cincinnati, OH, November 3, 1999.

290."Effects of Stress Triaxiality on Flow and Fracture of a Zr-Ti-Ni-Cu-Be BMG", P. Lowhaphandu, L.A. Ludrosky, J.J. Lewandowski,TMS Mtg, Cincinnati, OH, November 3, 1999.

291."Effects of Changes in Grain Size on Flow and Fracture of Nb and Nb-1% Zr", D. Padhi, A.V. Samant, and J.J. Lewandowski, TMS Fall Meeting, Cincinnati, OH, November 3, 1999.

292."Preliminary Experiments on an Advanced Deformation Simulator Apparatus", N.S. Prabhu and J.J. Lewandowski, TMS-AIME Fall Meeting, Cincinnati, OH, November 3, 1999.

293.**"High Pressure Effects on Flow and Fracture", J.J. Lewandowski, NASA Glenn Research Center, Cleveland, OH, November 8, 1999.

294.**"Effects of Hydrostatic Pressure on Flow, Fracture, and Deformation Processing", J.J. Lewandowski, Department of Materials Science, Imperial College of Science and Technology, London, U.K., December 8, 1999.

295.**"Deformation Processing and Simulation", J.J. Lewandowski, Luxfer Advanced Technology Centers Meeting, Chepstow, U.K., December 14, 1999.

296."Deformation Processing and Simulation", J.J. Lewandowski, DARPA, Arlington, VA, December 22, 1999.

2000

297.**"Flow and Fracture Studies on Bulk Metallic Glass", J.J. Lewandowski, Department of Matl's Science and Engineering, Johns Hopkins Univ., Baltimore, MD, February 23, 2000.

298."Fracture and Fatigue of Nb5Si3/Nb Composites"", D. Padhi, S. Solv'yev, W. Zinsser, and J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, March 15, 2000.

299.**"Microstructural Effects on the Cleavage Fracture Stress of Pearlitic Steels", J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, March 15, 2000.

300."Fracture and Fatigue of Al-Be Composites"", J. Larose, S. Solv'yev, R. Castro, and J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, March 15, 2000.

301."Densification and Flow Stress Evolution Processing Model for DRA", E. Hilinski,, T.J. Rodjom, P.T. Wang, J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, March 15, 2000.

302."Pressure Effects on Flow and Fracture of Monolithic and Composite Materials", P. Lowhaphandu and J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, March 15, 2000.

303."Dynamic Deformation and Fracture of Novel Damage Tolerant DRA Composites", M. Irfan, V. Prakash, and J.J. Lewandowski, TMS Mtg, Nashville, TN, March 15, 2000.

304."Environment-Assisted Cracking of AISI 305, 410 SS, and Low Alloy Steel ASTM A-325 Bolts/Fasteners in Chloride Containing Solutions", J.R. Oviedo, J.J. Lewandowski, and J.H. Payer, NACE Meeting, Orlando, FL, March 29, 2000.

305.**"Fracture and Fatigue of Refractory Metal Composites", J.J. Lewandowski, Instituto Militar de Engenharia – Department of Engineering Mechanics and Materials, Rio de Janeiro, Brazil, May 10, 2000.

306.**"Fracture and Fatigue of Al-Be Composites", J.J. Lewandowski, ONR Program Review, Woods Hole, MA, May 24, 2000.

307."Pressure Effects on Flow and Fracture of Al-Be Composites and Other Structural Materials", J. Larose and J.J. Lewandowski, 2000 Physical Metallurgy Gordon Conf, Plymouth, NH, July 26, 2000.

308."Processing and Microstructure Effects on Flow/Fracture of Nb/Nb Alloys", D. Padhi and J.J. Lewandowski, 2000 Physical Metallurgy Gordon Conf., Plymouth, NH, July 26, 2000.

309."Unique Forging Simulation Equipment for Evaluation of Flow Stress, Microstructure Evolution, and Resulting Properties of Deformation Processed Materials," N. Prabhu and J.J. Lewandowski, 2000 Physical Metallurgy Gordon Conference, Plymouth, NH, July 26, 2000.

310.**"Effects of Annealing and Changes in Stress State on Flow and Fracture of a Bulk Metallic Glass", J.J. Lewandowski, Engineering Foundation Conference on Bulk Metallic Glasses, Singapore, September 27, 2000.

311.**"Fracture and Fatigue of Refractory Metals and Intermetallic Composites", J.J. Lewandowski, AFOSR Program Review, St. Louis, MO, October 12, 2000.

312."Forgeability Studies on Aluminum Composite Materials", N. Prabhu and J.J. Lewandowski, MPIF International Meeting, Troy, MI, November 3, 2000.

313.**"Layered/Laminated Materials for Structural Applications", J.J. Lewandowski, ALCOA Technical Center, Pittsburgh, PA, November 17, 2000.

2001

314.**"Fracture and Fatigue of Refractory Metal Intermetallic Composites", J.J. Lewandowski, GE-CRD, Schenectady, NY, January 12, 2001.

315.**"Damage Tolerant Refractory Metal Intermetallic Composites", J.J. Lewandowski, WPAFB, Dayton, OH, February 6, 2001.

316."Effect of Superimposed Pressure on Fracture of Automotive Alloys", J.L. Gimple, D.S. Wilkinson, J.D. Embury, and J.J. Lewandowski, TMS Annual Meeting, New Orleans, LA, February 12, 2001.

317."Effects of Superimposed Pressure on Flow and Fracture of Al-Be Composites", J. Larose and J.J. Lewandowski, TMS Annual Meeting, New Orleans, LA, February 15, 2001.

318."Fracture and Fatigue of Al-Be Composites", J. Larose and J.J. Lewandowski, TMS Annual Meeting, New Orleans, LA, February 15, 2001.

319.**"Pressure and Stress State Effects on Flow and Fracture of Inorganic Materials", J.J. Lewandowski, International Conference on the Fundamentals of Fracture 6 – ICFF-6, Cirencester, UK, March 29, 2001.

320.**"Pressure and Stress State Effects on Flow and Fracture of Inorganic Materials", J.J. Lewandowski, Dept. Chemical and Materials Engineering, Arizona State University, Tempe, AZ, April 6, 2001.

321.**"Fracture and Fatigue Behavior of Be-Al Alloys", J.J. Lewandowski, ONR Review Meeting, Woods Hole, MA, June 14, 2001.

322.**"Pressure Effects on Flow and Fracture of Inorganic Materials", J.J. Lewandowski, Dept. of Eng. Sci. and Mechanics, Pennsylvania State Univ., State College, PA, June 18, 2001.

323.**"Fracture and Fatigue of Bulk Metallic Glass", J.J. Lewandowski, OAI Lecture Series, Ohio Aerospace Institute, Cleveland, OH, June 29, 2001.

324.**"Fracture of Al MMC's", J.J. Lewandowski, US National Computational Mechanics Symposium, Detroit, MI, August 3, 2001.

325."Flow and Fracture of Automotive Aluminum Alloys", J.L. Gimple, D.S. Wilkinson, J.D. Embury, and J.J. Lewandowski, Canadian Inst. Metallurgists, Toronto, Canada, August 28, 2001.

326.**"Forgeability Determination Study on Aluminum Composites", J.J. Lewandowski, N.S. Prabhu, and E.J. Hilinski, Fall TMS Meeting, Indianapolis, IN, November 7, 2001.

327."Fracture and Fatigue of Be-Al Composite Materials", J. Larose and J.J. Lewandowski, Fall TMS Meeting, Indianapolis, IN, November 8, 2001.

328.**"Processing and Properties of Amorphous Aluminum Alloys", J.J. Lewandowski, Ames Laboratory, Ames, IA, November 15, 2001.

329.**"Fracture and Fatigue of Toughened Composites", J.J. Lewandowski, J. Larose, and S. Solv'yev, ICF-10, Honolulu, HI, December 4, 2001.

330.**"Processing of Bulk Metallic Glass", J.J. Lewandowski, WPAFB Workshop on Amorphous Metals, Dayton, OH, December 11, 2001.

2002

331.**"Effects of Multiaxial Stresses on Flow and Fracture of Bulk Metallic Glass", J.J. Lewandowski, DARPA/California Institute of Technology Workshop on Structural Amorphous Metals, Pasadena, CA, January 10, 2002.

332.**"Fracture Surface Characterization and Characteristics", J.J. Lewandowski, Brush-Wellman Company, Cleveland, OH, January 31, 2002.

333."Effects of Stress State on Shear Banding", J.J. Lewandowski and P. Lowhaphandu, TMS Annual Meeting, Seattle, WA, February 19, 2002.

334."Fracture and Fatigue of Be-Al Composite Materials", J. Larose and J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 20, 2002.

335."Fracture and Fatigue of Bulk Metalllic Glass Composite Materials", J.J. Lewandowski, S. Solv'yev, and P. Lowhaphandu, TMS Annual Meeting, Seattle, WA, February 21, 2002.

336.“Structure-Property Relationships in Amorphous Materials”, P. Wesseling and J.J. Lewandowski, Dept. Matl’s Sci. Eng., Delft Univ. of Tech., Rotterdam, Delft, March 12, 2002.

337.**”Stress State and Temperature Effects on Flow/Fracture of Amorphous Metals – Relevance to Deformation Processing”, J.J. Lewandowski, Engineering Foundation Conference on Bulk Metallic Glasses II, Keelung, Taiwan, March 25, 2002.

338.“Effects of Annealing with Pressure on Structural Evolution and Mechanical Properties of $Al_{87}Ni_7Gd_6$ Metallic Glass”, B.C. Ko, P. Wesseling, L.O. Vatamanu, and J.J. Lewandowski, Engineering Foundation Conference on BMG II, Keelung, Taiwan, March 26, 2002.

339.**”Flow and Fracture of Bulk Metallic Glasses”, J.J. Lewandowski, National Taiwan University – Dept. Materials Science and Engineering, Taipei, Taiwan, March 28, 2002.

340.“Fracture and Fatigue of Nb, Nb Alloys, and Nb Silicide Composites”, J.J. Lewandowski, D. Padhi, and S. Solv’yev, ISSI-III, Jackson, WY, April 30, 2002.

341.**”Processing and Property Studies on Bulk Metallic Glasses”, J.J. Lewandowski, Stanford University - Dept. Materials Science and Engineering, Palo Alto, CA, May 17, 2002.

342.**”Pressure Effects on Structure Evolution in Metallic Glasses”, J.J. Lewandowski, DARPA SAM Meeting, San Francisco, CA, June 20, 2002.

343.**”Processing Effects on Structure Evolution and Properties in Aluminum Based Metallic Glasses”, J.J. Lewandowski, Boeing Phantom Works, Saint Louis, MO, July 17, 2002.

344.**”Pressure/Stress State Effects on Flow and Fracture of Inorganic Materials and Composites”, J.J. Lewandowski, Georgia Institute of Technology - Dept. Materials Science and Engineering, Atlanta, GA, August 1, 2002.

345.**”Strategies for Sustained Growth and Excellence in Materials Science and Engineering”, J.J. Lewandowski, Georgia Institute of Technology - Dept. Materials Science and Engineering, Atlanta, GA, August 1, 2002.

346.**”Pressure/Stress State Effects on Flow and Fracture of Inorganic Materials and Composites”, J.J. Lewandowski, University of Cambridge - Dept. Materials Science and Metallurgy, Cambridge, UK, August 20, 2002.

347.“Sustained Load Cracking of Al Alloys”, S.L. Johnson, J.J. Lewandowski, and N.J.H. Holroyd, ASM/TMS Fall Meeting, Columbus, OH, October 7, 2002.

348.“Effects of Changes in Layer Thickness on Fatigue Crack Propagation of Laminated Metal Composites”, H. Hassan, M. Abd Latif, and J.J. Lewandowski, ASM/TMS Fall Meeting, Columbus, OH, October 8, 2002.

349.“Effects of Changes in Load Ratio on Fatigue Crack Growth in a Fully Pearlitic Eutectoid Steel”, A. El Shabasy and J.J. Lewandowski, ASM/TMS Mtg, Columbus, OH, October 8, 2002.

350.“Effects of Annealing on Structure and Mechanical Properties of Al87Ni7Gd6 Metallic Glass”, P. Wesseling, B.C. Ko, L.O. Vatamanu, J. Caris, and J.J. Lewandowski, ASM/TMS Fall Meeting, Columbus, OH, October 8, 2002.

351.“Formability Studies on Cu-Based Composites”, A. Awadallah, G.M. Michal, D. Ellis, and J.J. Lewandowski, ASM/TMS Fall Meeting, Columbus, OH, October 8, 2002.

352."Fracture Toughness of Amorphous Metals and Composites", J.J. Lewandowski, A.K. Thurston, and P. Lowhaphandu, MRS Symposium Supercooled Liquids, Glass Transition, Bulk Metallic Glasses, Boston, MA, December 4, 2002.

353."Effects of Annealing and Annealing with Pressure on Devitrification of $A_{l87}Ni_7Gd_7$", P. Wesseling, P. Lowhaphandu, and J.J. Lewandowski, MRS Symposium on Supercooled Liquids, Glass Transition, and Bulk Metallic Glasses, Boston, MA, December 5, 2002.

354.“Hardness Indentation Studies on Metallic Glasses", P. Wesseling, P. Lowhaphandu, and J.J. Lewandowski, MRS Meeting, Boston, MA, December 2, 2002.

355."Effects of Superimposed Pressure on Flow/Fracture of Two Bulk Amorphous Metals", P. Wesseling, P. Lowhahphandu, J.J. Lewandowski, MRS Mtg., Boston, MA, December 2, 2002.

2003

356.**"Fracture and Fatigue of Bulk Glasses", J.J. Lewandowski, California Institute of Technology, Pasadena, CA, January 9, 2003.

357.**"Deformation Behavior of Amorphous Metals", J.J. Lewandowski, WPAFB, Dayton, OH, February 3, 2003.

358.**"Toughness of Metallic Glass and Bulk Metallic Glass", J.J. Lewandowski and P. Lowhaphandu, TMS Spring Meeting, San Diego, CA, March 4, 2003.

359.**"Pressure Effects on Flow, Fracture, and Processing of NiAl", J.J. Lewandowski, R.W. Margevcicius, and J.D. Rigney, TMS Spring Meeting, San Diego, CA, March 4, 2003.

360."Effects of Changes in Test Temperature and Notch Radius on Fracture Toughness of Fully Pearlitic Eutectoid Steel", A.B. El-Shabasy and J.J. Lewandowski, TMS Spring Meeting, San Diego, CA, March 5, 2003.

361."Effects of Mixed Mode Loading on Fracture Toughness of Fully Pearlitic Eutectoid Steel at Low Temperature", A.B. El-Shabasy and J.J. Lewandowski, TMS Spring Meeting, San Diego, CA, March 5, 2003.

362."Effects of Changes in Test Temperature on Fatigue Crack Propagation in Laminated Metal Composites", H.A. Hassan, J.J. Lewandowski, and M.H. Abdl-latif, TMS Spring Meeting, San Diego, CA, March 5, 2003.

363."Fracture and Fatigue of Amorphous Metals and Composites", J.J. Lewandowski, Liquidmetal, Lake Forest, CA, March 6, 2003.

364.** "Deformation and Fracture Studies on Amorphous Metals", J.J. Lewandowski, Cal Tech DARPA Review Meeting, Washington, DC, March 30, 2003.

365."Formability of a High Performance Copper Alloy: GRCop-84", A. Awadallah, G.M. Michal, D.L. Ellis, and J.J. Lewandowski, CWRU SHOWCASE, Cleveland, OH, April 4, 2003.

366."Test Temperature Effects on Fatigue in Laminated Metal Composites", H.A. Hassan, J.J. Lewandowski, and M.H. Abdl-Latif, CWRU SHOWCASE, Cleveland, OH, April 4, 2003.

367."Effects of Mixed Mode Loading on Fracture Toughness of Fully Pearlitic Eutectoid Steel at Low Temperature", A.B. El-Shabasy and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 4, 2003.

368.**"Effects of Interfaces on Systems Containing Amorphous Metals", J.J. Lewandowski, ONR Steels Review, St. Michael, MD, April 11, 2003.

369.**"Amorphous Metals-Properties and Performance", J.J. Lewandowski, Lawrence Livermore Nat'l Lab, Livermore, CA, April 30, 2003.

370.**"Deformation and Fracture of Amorphous Metals" J.J. Lewandowski, Lawrence Livermore Nat'l Lab Staff Seminar, Livermore, CA, April 30, 2003.

371.**"Deformation and Fracture of Amorphous Metals" J.J. Lewandowski, SRI International, Menlo Park, CA, May 1, 2003.

372.**"Deformation and Fracture of Foams", J.J. Lewandowski, ONR Review, Woods Hole, MA, May 29, 2003.

373.**"Studies on Metallic Glasses", J.J. Lewandowski, DARPA Review, Arlington, VA, July 7, 2003.

374.**"Fracture and Fatigue of Amorphous Aluminum Alloys", J.J. Lewandowski, Questek, Chicago, IL, July 15, 2003.

375.**"Deformation and Fracture Studies on Amorphous Metals", J.J. Lewandowski, Exxon-Mobil Company, Annandale, NJ, July 22, 2003.

376."Blast Resistant Materials and Structures Testing", J.J. Lewandowski and V. Prakash, Airlie VA, September 3, 2003.

377.**"Fracture and Fatigue of Be-Al Alloys", J.J. Lewandowski, Brush-Wellman, Cleveland, OH, September 5, 2003.

378.**"Microstructure-Property Relationships in Advanced Materials", J.J. Lewandowski, MSNO Fall Meeting, Materials Park, OH, October 5, 2016.

379.**"Deformation and Fracture of BMG and BMG Composites", P. Wesseling and J.J. Lewandowski, BMG III, Beijing, China, October 14, 2003.

380.**"Deformation and Fracture of High Toughness BMG and BMG Composites", J.J. Lewandowski, Composites at Lake Louise, Lake Louise, Canada, October 22, 2003.

381."Effects of Annealing on Structure and Properties of Amorphous Aluminum", P. Wesseling and J.J. Lewandowski, Composites at Lake Louise, Lake Louise, Canada, October 23, 2003.

382."Fracture Studies on BMG and BMG Composites", A.K. Thurston and J.J. Lewandowski, Composites at Lake Louise, Lake Louise, Canada, October 23, 2003.

383.**"Fracture and Fatigue of Nb Alloys and Silicide Composites", J.J. Lewandowski, Rolls Royce R&D Laboratory, Derby, UK, October 29, 2003.

384.**"Flow, Fracture, and Fatigue of Bulk Metallic Glass and Composites", J.J. Lewandowski, Gordon Seminar Series, University of Cambridge, UK, October 31, 2003.

385.**"Effects of Changes in Notch Radius and Mixed Mode Loading on Toughness of Fully Pearlitic Eutectoid Steel", A.B. El-Shabasy and J.J. Lewandowski, TMS Fall Meeting, Chicago, IL, November 10, 2003.

386.**"Cleavage Fracture of Pearlitic Steels With 7-15 Volume Percent Cementite", G.M. Michal, T.D. Nixon, and J.J. Lewandowski, TMS Mtg, Chicago, IL, November 10, 2003.

387.**"Effects of Load-Ratio and Test Temperature on Fatigue Crack Growth Behavior of Fully Pearlitic Eutectoid Steel", A.B. El-Shabasy and J.J. Lewandowski, TMS Fall Meeting, Chicago, IL, November 10, 2003.

388.**"Effects of Changes in Test Temperature on Fatigue Crack Propagation of Laminated Metal Composites (LMCs)", H.A. Hassan, J.J. Lewandowski, and M.H. Abd El-Latif, TMS Fall Meeting, Chicago, IL, November 10, 2003.

389."Fracture of Bulk Metallic Glass Composites", A.K. Thurston and J.J. Lewandowski, TMS Fall Meeting, Chicago, IL, November 10, 2003.

390."Formability of a Dispersion Strengthened Cu-Cr-Nb Alloy", A. Awadallah, G.M. Michal, D.L. Ellis, and J.J. Lewandowski, TMS Fall Meeting, Chicago, IL, November 12, 2003.

391."Fracture and Fatigue of Bulk Metallic Glass", J.J. Lewandowski, Engineering Department, University of Cambridge, UK, November 25, 2003.

392.**"Fracture and Fatigue of Nb Alloys and Composites", J.J. Lewandowski, Int'l Conference on Nb Alloys for High Temperature Applications", Araxa, Brazil, December 2, 2003.

393.**"Effects of Changes in Stress State on Damage Evolution in Structural Materials", J.J. Lewandowski, Dept. Materials Science, Louvain La Nueve, Belgium, December 12, 2003.

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394.**"Deformation and Fracture Issues in Bulk Metallic Glasses", J.J. Lewandowski, INPG, Grenoble, France, January 6, 2004.

395.**"Deformation and Fracture Issues in Bulk Metallic Glasses", J.J. Lewandowski, INSA, Lyon, France, January 7, 2004.

396."Effects of Mixed Mode Loading on Fracture of Bulk Metallic Glasses", A.K. Thurston and J.J. Lewandowski, TMS Annual Meeting, Charlotte, NC, March 17, 2004.

397."Fatigue of Laminated Metal Composites", H.A. Hassan, P. Wesseling, and J.J. Lewandowski, TMS Annual Meeting, Charlotte, NC, March 17, 2004.

398."Novel Deformation Processing of Amorphous Metals", P. Wesseling and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 2, 2004.

399.**"Bulk Metallic Glasses - Materials of the Future?", J.J. Lewandowski, Postprandial Talk, Churchill College, University of Cambridge, UK, April 23, 2004.

400.**"Interface Effects on Fracture of Metallic Glass Coatings", J.J. Lewandowski, DARPA DOE Workshop on Yucca Mountain Storage Issues, Arlington, VA, April 26, 2004.

401.**"Effects of Interfaces on Energy Absorption in Bulk Metallic Glasses and Composites", J.J. Lewandowski, Navy Steels Meeting, Annapolis, MD, May 20, 2004.

402.**"Effects of Changes in Loading Rate on Aluminum Alloys", J.J. Lewandowski, ONR Program Review, Woods Hole, MA, June 4, 2004.

403.**"Experiments and Modeling of Pb-Induced Sustained Load Cracking in Al Alloys", J.J. Lewandowski, P.M. Singh, N.J.H. Holroyd, NUMIFORM, Columbus, OH, June 16, 2004.

404."Opportunities in Bulk Metallic Glasses and Composites", J.J. Lewandowski, Qinetic Visit to University of Cambridge, Cambridge, UK, July 15, 2004.

405.**"Deformation and Fracture of Bulk Metallic Glasses", J.J. Lewandowski, T. Jacobs, and A.L. Greer, European Physical Society Meeting, Prague, Czech Republic, July 19, 2004.

406.**"Effects of Microstructure and Loading Rate on Aluminum Alloys Used in Blast Resistant Structures", J.J. Lewandowski, X. Tang, A. Nouri, and V. Prakash, Workshop on Blast Resistant Materials and Structures, Airlie, VA, September 1, 2004.

407.**"Flow, Fracture, and Biocompatibility of Bulk Metallic Glasses", J.J. Lewandowski, Dept. Materials Science and Engineering, CWRU, Cleveland, OH, September 21, 2004.

408."Mechanical Behavior of BMG/BMG Composites", P. Wesseling, A.K. Thurston, P. Lowhaphandu, and J.J. Lewandowski, TMS Fall Meeting, New Orleans, LA, Sept. 28, 2004.

409.**"Fracture and Fatigue of Nb Alloys and Composites", J.J. Lewandowski, NASA Glenn Research Center, Cleveland, OH, October 5, 2004.

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410.**"Fracture and Fatigue of Devitrified Amorphous Aluminum Alloys", J.J. Lewandowski, Univ. of Missouri-Rolla, Rolla, MO, January 10, 2005.

411."Experimental Observations of Shear Banding in Bulk Metallic Glass", J.J. Lewandowski, N.A. Stelmashenko, and A.L. Greer, TMS Meeting, San Francisco, CA, February 15, 2005.

412."Ductile vs Brittle Behavior of Metallic Glasses", J.J. Lewandowski, W.H. Wang, and A.L. Greer, TMS Annual Meeting, San Francisco, CA, February 16, 2005.

413."Effects of Changes in Notch Radius on Deformation and Fracture of a Bulk Metallic Glass", T. Jacobs, J.J. Lewandowski, A.L. Greer, and S. Tin, TMS Annual Meeting, San Francisco, CA, February 16, 2005.

414."Effects of Changes in Specimen Geometry and Loading Rate on a BMG", G. Sunny, A.S.Nouri, J.J. Lewandowski, and V. Prakash, TMS Annual Mtg, San Francisco, CA, February 16, 2005.

415."Effects of Superimposed Pressure on Flow and Fracture of BMG's and Devitrified Amorphous Aluminum Alloys", P. Wesseling, L.O. Vatamanu, and J.J. Lewandowski, TMS Annual Meeting, San Francisco, CA, February 16, 2005.

416."High Temperature Hardness Indentation Studies on Metallic Glasses", P. Wesseling and J.J. Lewandowski, TMS Annual Meeting, San Francisco, CA, February 16, 2005.

417."Effects of Changes in Microstructure, Strain Rate on 6061 Aluminum", A.S. Nouri, X. Tang, J.J. Lewandowski, and V. Prakash, TMS Mtg., San Francisco, CA, February 16, 2005.

418."Novel Deformation Processing of Amorphous Metal MEMS/Larger Structures", P. Wesseling, A.S. Nouri, and J.J. Lewandowski, TMS Mtg, San Francisco, CA, February 16, 2005.

419.**"Flow and Fracture Studies on Metallic Glasses", J.J. Lewandowski, ONR Naval Steels and Welding Meeting, Warrenton, VA, March 31, 2005.

420."High Strength Copper-Nickel-Tin Alloy for Electrical Applications", J. Caris, J.J. Stephens, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2005.

421."Effects of Superimposed Pressure and Elevated Temperature on Flow and Fracture of a Zr-based Bulk Metallic Glass and Nano-structured Al Alloy", L.O. Vatamanu and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2005.

422."Dynamic Behavior of Zr-based Bulk Metallic Glass with Applications to Blast Resistant Structures", G. Sunny, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2005.

423."Dynamic Deformation of Advanced Aluminum Alloys with Applications to Ultra-light Weight Blast Resistant Naval Structures", X. Tang, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2005.

424."Effects of (Micro)structural Changes on Mechanical Properties of Open-Cell Ni Foams", K. Lee and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2005.

425.**"Flow and Fracture Studies on BMG's and Composites", J.J. Lewandowski, BMG IV, Gatlinburg, TN, May 4, 2005.

426.**"Effects of Changes in Loading Rate and Test Temperature on Al Alloys and Truss Structures", J.J. Lewandowski, ONR Program Review, Woods Hole, MA, June 2, 2005.

427."Mechanical Testing Faclities at CWRU", J.J. Lewandowski, Visit of DELPHI to CWRU, Cleveland, OH, June 23, 2005.

428.**"Fracture and Fatigue of Aerospace Materials", J.J. Lewandowski, Timken VAATE Kickoff Meeting, WPAFB, OH, June 29, 2005.

429.**"Brittleness or Plasticity of Metallic Glasses", A.L. Greer and J.J. Lewandowski, ISMANAM, Paris, France, July 5, 2005.

430."Fatigue of Wires", J.J. Lewandowski, DELPHI-CWRU, Cleveland, OH, August 25, 2005.

431.**"Effects of Changes in Loading Rate, Test Temperature, and Heat Treatment on Al Alloys and Aluminum Truss Structures", J.J. Lewandowski, ONR Meeting on Materials and Structures for Advanced Ship Protection, Warrenton, VA, August 30, 2005.

432."Fracture of Metallic Glasses: Brittleness or Plasticity", X.K. Xi, D.Q. Zhao, M.X. Pan, W.H. Wang, Y. Wu, J.J. Lewandowski, EUROMAT 2005, Prague, Czech, September 5, 2005.

433."High Strength Cu-Ni-Sn Alloy for Electrical Connector Applications", J.B. Caris, J.J. Stephens, and J.J. Lewandowski, MS&T, Pittsburgh, PA, September 26, 2005.

434."Mechanical Behavior of Cu-Based Bulk Metallic Glasses", J.J. Lewandowski, A. Awadallah, P. Wesseling, W.H. Wang, and Y. Liu, MS&T, Pittsburgh, PA, September 27, 2005.

435."Fracture of Bulk Metallic Glass-W Composites", A. Vormelker, M. Shazly, L. Kecskes, and J.J. Lewandowski, MS&T, Pittsburgh, PA, September 28, 2005.

436."Dynamic Deformation Behavior of Aluminum Alloys and Aluminum Alloy Truss Structures", X. Tang, M. Shazly, V. Prakash, A. Nouri, and J.J. Lewandowski, MS&T, Pittsburgh, PA, September 28, 2005.

437."Effects of Changes in Specimen Geometry and Loading Rate on a Bulk Metallic Glass", G. Sunny, J.J. Lewandowski, and V. Prakash, MS&T, Pittsburgh, PA, September 28, 2005.

438."Microstructure Effects on Fracture and Fatigue of Advanced Nb-Si Alloys", M. Shazly, Y. Liu, and J.J. Lewandowski, MS&T, Pittsburgh, PA, September 28, 2005.

439.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, Int'l Workshop on Flow and Fracture of Advanced Glasses, State College, PA, October 5, 2005.

440.**"Materials for National Security", J.J. Lewandowski, 125th Anniversary of CASE, Case Western Reserve University, Cleveland, OH, October 15, 2005.

441.**"High Toughness Amorphous Metals and Composites", J.J. Lewandowski, Composites at Lake Louise, Lake Loiuse, Canada, October 30, 2005.

442.**"High-Performance Corrosion-Resistant Materials for Naval Warfare & Safe Storage of Spent Nuclear Fuel – Mechanical Behavior of Amorphous Metal Systems", J.J. Lewandowski, Nuclear Waste Technical Review Board (NWTRB), Arlington, VA, November 16, 2005.

443.**"Effects of Heat Treatment and Loading Rate on Materials for National Security", J.J. Lewandowski, ONR, Arlington, VA, November 29, 2005.

444.**"Flow and Fracture Studies on Amorphous Metals and Composites", J.J. Lewandowski, MRS Meeting, Boston, MA, December 1, 2005.

445.**"High-Performance Corrosion-Resistant Materials for Naval Warfare & Safe Storage of Spent Nuclear Fuel–Mechanical Behavior of Amorphous Metals", J.J. Lewandowski, Office of Civilian & Radioactive Waste Management (OCRWM), Las Vegas, NV, December 6, 2005.

446.**"Fracture and Fatigue Studies on Nb and Nb Alloys", J.J. Lewandowski, GE-Global, Schenectady, NY, December 19, 2005.

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447.**"Flow, Fracture, and Fatigue of Metallic Glasses and Composites", J.J. Lewandowski, Kennametal Research Center, Latrobe, PA, January 6, 2006.

448.**"Mechanical Behavior of Amorphous Metal Systems", J.J. Lewandowski, DOE/DARPA HPCRM Meeting, Key West, FLA, January 18, 2006.

449.**"Fracture and Fatigue Behavior of Materials for Bearing Applications", J.J. Lewandowski, TIMKEN R&D, Canton, OH, February 8, 2006.

450.**"Fracture and Fatigue Behavior of Metal Matrix Composites", J.J. Lewandowski, TIMKEN R&D, Canton, OH, February 8, 2006.

451.**"Flow and Fracture Studies on Bulk Metallic Glasses and Composites", J.J. Lewandowski, ASM Canton-Massillon Chapter, Canton, OH, February 8, 2006.

452."Effects of Changes in Test Temperature and Loading Rate on the Fracture Toughness of Bulk Metallic Glass-W Composites", A. Vormelker, M. Shazly, L. Kecskes, and J.J. Lewandowski, 2006 Int'l Conference on W, Refractory and Hardmetals VI, Orlando, FLA, February 8, 2006.

453.**"Flow and Fracture Studies on Bulk Metallic Glasses and Composites", J.J. Lewandowski, University of Illinois at Urbana-Champaign, Dept. Materials Science and Engineering, Urbana-Champaign, ILL, February 20, 2006.

454.**"Mechanical Behavior of Amorphous Metal Systems", J.J. Lewandowski, Caterpillar Tractor, Peoria, ILL, February 21, 2006.

455.**"Flow and Fracture Studies on Bulk Metallic Glasses and Composites", J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 13, 2006.

456."Scaling Laws in Fracture of Metallic Glasses", X.K. Xi, D.Q. Zhao, M.X. Pan, Y. Wu, and J.J. Lewandowski, APS Meeting, Baltimore, MD, March 15, 2006.

457."High Strength Cu-Ni-Sn Alloy for Electrical Applications", J. Caris, J.J. Stephens, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

458."Effects of Changes in Test Temperature and Pressure on Bulk Metallic Glasses (BMGs)" , L.O. Vatamanu, A. Vormelker, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

459."Intrinsic and Extrinsic Toughening of Bulk Metallic Glasses", A. Shamimi Nouri, M. Shazly, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

460."Effects of Changes in Test Temperature/Pressure on Bulk Metallic Glasses", L.O. Vatamanu, A. Vormelker, J.J. Lewandowski, Research SHOWCASE, CWRU,Cleveland, OH, April 6, 2006.

461."High Strain-Rate Compression of As-Cast and Annealed BMG", G. Sunny, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

462."Dynamic Deformation Behavior of Al Alloys and Al Alloy Truss Structures", X. Tang, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

463."Damage Assessment of the Effect of Hydrostatic Pressure on Equine Bone", K. Lee, J.J. Lewandowski, C.M. Rimnac, C. Hernandez, and L.O. Vatamanu, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

464."Mechanical Behavior/Performance of Implantable Silver-Cored Conducting Cables", J.J. Lewandowski, H.M. Ha, Y. Liu, J.H. Payer, M. Shazly, and C.J. Tuma, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

465."Temperature Sensitive Nano-Scale Coatings with High Spatial and Temporal Resolution", J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 6, 2006.

466.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, Engineering Foundation Conference on Mechanics and Properties of Noncrystalline Materials, I: Amorphous Metals, Beijing, China, April 25, 2006.

467.**"Flow, Fracture, and Fatigue Studies on Composites and Bulk Metallic Glasses", J.J. Lewandowski, 2006 ASM-TMS Spring Symposium – Hudson-Mohawk Chapter, GE Global Research, Niskayuna, NY, May 23, 2006.

468.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, ONR Steels Meeting, Arlington, VA, May 25, 2006.

469."Dynamic Tensile Deformation of Aluminum Alloy 6061-T6 and 6061-OA", X. Tang, V. Prakash, and J.J. Lewandowski, Soc. Exp. Mechanics, St. Louis, MO, June 5, 2006.

470."Dynamic Compression of Amorphous and Annealed Bulk Metallic Glass", G. Sunny, J.J. Lewandowski, and V. Prakash, Soc. Exp. Mechanics, St. Louis, MO, June 5, 2006.

471."Fracture and Fatigue of Candidate Bearing Materials", J.J. Lewandowski, Air Propulsion Directorate – Wright Patterson Air Force Base, Dayton, OH, September 14, 2006.

472.**"Flow and Fracture Studies on BMG", J.J. Lewandowski, Chemical Engineering Seminar Series, Case Western Reserve University, Cleveland, OH, September 28, 2006.

473.**"Mechanical Behavior of Implantable Electrodes", J.J. Lewandowski, Cleveland MetroHealth Center Hospital, Cleveland, OH, October 11, 2006.

474."High Strength Cu-Ni-Sn Alloy for Electrical Connector Applications", J.B. Caris, J.J. Lewandowski, and J.J. Stephens, MS&T '06, Cincinnati, OH, October 16, 2006.

475."Dynamic Compression Behavior of 6061 Aluminum Alloy Truss Structures", X. Tang, V. Prakash, and J.J. Lewandowski, MS&T '06, Cincinnati, OH, October 17, 2006.

476."Dynamic Tensile Deformation of Aluminum Alloys AA-6061 and AA-5083", X. Tang, V. Prakash, and J.J. Lewandowski, MS&T '06, Cincinnati, OH, October 17, 2006.

477."Effects of Test Temperature on Flow of Metallic Glasses", A.S. Nouri, Y. Liu, P. Wesseling, and J.J. Lewandowski, MS&T '06, Cincinnati, OH, October 17, 2006.

478."Experiments on High Strain-Rate Compression of a Bulk Metallic Glass", G. Sunny, J.J. Lewandowski, and V. Prakash, MS&T '06, Cincinnati, OH, October 18, 2006.

479."Temperature and Loading Rate Effects on Mechanical Behavior of Bulk Metallic Glasses and Composites", A.H. Vormelker, M. Shazly, L.Vatamanu, J.J. Lewandowski, and L. Kecskes, MS&T '06, Cincinnati, OH, October 18, 2006.

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480.**"Mechanical Behavior of Advanced Bearing Materials", J.J. Lewandowski and D. Herman, Timken-VAATE meeting, Timken R&D, Canton, OH, January 18, 2007.

481.**"Department of Materials Science and Engineering Overview", J.J. Lewandowski, OAI-CWRU Site Visit, CWRU, Cleveland, OH, February 2, 2007.

482.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, February 26, 2007.

483."Experiments on High Strain-Rate Compression of Bulk Metallic Glass", G. Sunny, V. Prakash, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, February 26, 2007.

484."High Strain-Rate Compression of As-Cast and Annealed Bulk Metallic Glass", G. Sunny, J.J. Lewandowski, and V. Prakash, TMS Annual Meeting, Orlando, FL, February 26, 2007.

485."Spall Strength of a Zr-Based Bulk Metallic Glass", F. Yuan, J.J. Lewandowski, and V. Prakash, TMS Annual Meeting, Orlando, FL, February 27, 2007.

486."Mechanical Properties and Structure of Cu-15Ni-8Sn after Thermal Excursions", J.B. Caris, J.J. Lewandowski, and J. Stephens, TMS Meeting, Orlando, FL, February 28, 2007.

487."Structure of Shock Waves and Hugoniot Elastic Limit of a Zr-Based Bulk Metallic Glass", F. Yuan, V. Prakash, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 1, 2007.

488.**"Bulk Metallic Glasses: Materials of the Future?", J.J. Lewandowski, UMS Meeting, CWRU, Cleveland, OH, March 29, 2007.

489.**"Graduate Materials Research in Support of National Priorities", J.J. Lewandowski, Symposium Day 20007, Michigan State University, East Lansing, MI, April 9, 2007.

490."Spall Strength and Hugoniot Elastic Limit of a Zr-based Bulk Metallic Glass", F. Yuan, J.J. Lewandowski, and V. Prakash, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

491."Heat Treatment Effects on Structure Evolution and Mechanical Properties of Cu-15Ni-8Sn", J.B. Caris, J.J. Stephens, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

492."Deformation and Fracture Experiments on Advanced Aerospace Materials", D. Herman and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

493."Thermal Exposure Effects on Mechanical Behavior of Fe-, Zr-, and Al-based Metallic Glass", C.K. Huang, A.S. Nouri, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

494."Ductile vs Brittle Behavior of Metallic Glasses", A.S. Nouri, W.H. Wang, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

495."Center for Mechanical Characterization of Materials", J.J. Lewandowski and C.J. Tuma, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

496."Mechanical Behavior of Implantable Silver-cored Composite Cables", R. Varadarajan, L.O. Vatamanu, B. Smith, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

497."High Strain-Rate Compression of Zr- and Fe-based Bulk Metallic Glasses", G. Sunny, J.J. Lewandowski, and V. Prakash, Research SHOWCASE, CWRU, Cleveland, OH, April 12, 2007.

498."Bulk Metallic Glasses: Materials of the Future?", A.S. Nouri and J.J. Lewandowski, SCSAM Dedication, CWRU, Cleveland, OH, April 16, 2007.

499.**"Hydrostatic Extrusion: Effects of Changes in Stress State on Flow, Fracture, and Deformation Processing of Materials", J.J. Lewandowski, ASM Education Seminar, OAI, Cleveland, OH, May 9, 2007.

500.**"Effects of Changes in Loading Rate, Stress State, and Test Temperature on Flow, Fracture, and Fatigue of Amorphous Aluminum Alloys", J.J. Lewandowski, Pratt & Whitney SAM II Kickoff Meeting, San Antonio, TX, May 17, 2007.

501.**"Flow and Fracture of Bulk Metallic Glasses", J.J. Lewandowski, 1st US/Poland Technical Exchange, Polish Academy Sciences/Warsaw Univ. Tech., Warsaw, Poland, May 24, 2007.

502.**"Loading Rate/Heat Treatment Effects on Flow/Fracture of Al Alloys for Naval Applications", J.J. Lewandowski, ONR Review – Colorado School of Mines, Golden, CO, May 30, 2007.

503."Microdamage Assessment in Equine Bone Resulting from High Hydrostatic Pressure and/or Irradiation", K. Lee, K.E. Warden, O.L. Vatamanu, C.J. Hernandez, C.M. Rimnac, J.J. Lewandowski, 2007 Soc. Exptal. Mech. (SEM) Conference, Springfield, MASS, June 4, 2007.

504."Shock Response of a Zr-based Bulk Metallic Glass", F. Yuan, V. Prakash, and J.J. Lewandowski, 13th Intl Symposium on Plasticity and Applications, Girdwood, AL, June 5, 2007.

505.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, ONR Steels Review, Alexandria, VA, June 14, 2007.

506.**"High Strain-Rate Compression of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash, and J.J. Lewandowski, Polytecnico di Turino, Turin, Italy, September 5, 2007.

507."High Strain-Rate Compression of Zirconium- and Iron-Based Bulk Metallic Glasses", G. Sunny, V. Prakash, and J.J. Lewandowski, Euromat 2007 - European conference and Exhibition on Advanced Materials and Processes, Nuremberg, Germany, September 11, 2007.

508."Experiments on High Strain-Rate Compression of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash, and J.J. Lewandowski, Materials Science and Technology 2007 Conference, Detroit, MI, September 17, 2007.

509."Dynamic Response of a Zr-based Bulk Metallic Glass under Combined Pressure-shear Loading", F. Yuan, V. Prakash, and J.J. Lewandowski, Materials Science and Technology 2007 Conference, Detroit, MI, September 17, 2007.

510."Thermal Exposure Effects on Mechanical Behavior of Iron-based Metallic Glass", A. Shamimi Nouri ,J.J. Lewandowski, MS&T 2007, Detroit, MI, September 17, 2007.

511."Quasi-Static and Dynamic Compression of Fe-based Bulk Metallic Glass", G. Sunny, A. Shamimi Nouri, V. Prakash, J.J. Lewandowski, MS&T 2007, Detroit, MI, September 17, 2007.

512."Effects of Composition Changes on Mechanical Properties of Iron Based Metallic Glass Ribbons", A. El-Shabasy, H.A. Hassan, and J.J. Lewandowski, MS&T 2007, Detroit, MI, September 17, 2007.

513."Effects of Thermal Exposure on Fatigue Crack Propagation of Laminated Metal Composites (LMCs)", H.A. Hassan, A. El-Shabasy, and J.J. Lewandowski, MS&T 2007, Detroit, MI, September 17, 2007.

514."Heat Treatment Effects on Structure Evolution, Mechanical Properties of Cu-15Ni-8Sn", J. Caris, D. Li, J.J. Stephens, J.J. Lewandowski, MS&T 2007, Detroit, MI, September 17, 2007.

515.**"Intrinsic and Extrinsic Approaches to Plasticity/Toughness of Bulk Metallic Glasses", J.J. Lewandowski, MS&T 2007, Detroit, MI, September 18, 2007.

516.**"Novel Flow Behavior of Bulk Metallic Glasses", J.J. Lewandowski, Solidica, Ann Arbor, MI, September 18, 2007.

517."Strength and Structural Evolution of Cu-15Ni-8Sn with Heat Treatment", J.B. Caris, J. Stephens, and J.J. Lewandowski, MS&T 2007, Detroit, MI, September 20, 2007.

518."Fracture and Fatigue Behavior of Multi-strand Implantable Electrodes", R. Varadarajan, L.O. Vatamanu, B. Smith, and J.J. Lewandowski, MS&T 2007, Detroit, MI, September 20, 2007.

519."A Microstructure Investigation Along the Path of Fatigue Crack Growth in Nb-10 at% Si", Y. Liu, M. Shazly, and J.J. Lewandowski, MS&T 2007, Detroit, MI, September 20, 2007.

520.**"Techniques for Assessing Effects of Changes in Test Temperature and Strain Rate on Flow Stress and Friction Coefficient Relevant to Friction Stir Welding Conditions", J.J. Lewandowski, ONR Friction Stir Technology Meeting, Midway, UT, October 17, 2007.

521.**"Unique Flow and Fracture Behavior of Bulk Metallic Glasses/Composites", J.J. Lewandowski, Composites at Lake Louise, Lake Louise, Canada, October 29, 2007.

522."Mechanical Behavior of Implantable Electrodes", J.J. Lewandowski, R. Varadarajan, L. Vatamanu, and B. Smith, B. (2007). 12th Annual Conference on the International FES Society, Philadelpia, PA, Nov. 2007.

523.**"Ultrasonic Bonding of Metallic Glass", J.J. Lewandowski, DARPA-SAIC, Arlington, VA, November 29, 2007.

524.**"Flow and Fracture Studies on Metallic Glasses", J.J. Lewandowski, MRS Symposium on Bulk Metallic Glasses, Boston, MA, November 30, 2007.

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525.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, BP Visit to Dept. Matls Sci. and Eng., CWRU, Cleveland, OH, February 1, 2008.

526.**"Flow and Fracture Studies on Bulk Metallic Glasses and Composites", J.J. Lewandowski, Dept. Matls Sci. and Eng, The Ohio State University, Columbus, OH, February 8, 2008.

527.**"Interface Effects on Fracture and Fatigue of Laminated Aluminum Composites", J.J. Lewandowski, TMS Annual Meeting, New Orleans, LA, March 10, 2008.

528.**"Dynamic and Shock Response of a Zr-based Bulk Metallic Glass", G. Sunny, F. Yuan, V. Prakash, and J.J. Lewandowski, Army Research Lab, Aberdeen, MD, March 13, 2008.

529.**"Flow and Fracture Studies on BMGs and Composites", J.J. Lewandowski, Dept. Matls Science and Engineering, Georgia Institute of Technology, Atlanta, GA, April 8, 2008.

530."Effect of Senstization on the Microstructure and the Mechanical Properties of 5XXX Aluminum Alloys", D. Li, H. Hassan, A. El-Shabasy, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

531."Effects of Superimposed Pressure on Flow of Metallic Glass", A. Shamimi Nouri, J. Caris, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

532."Center for Mechanical Characterization of Materials", J.J. Lewandowski and C.J. Tuma, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

533."Fatigue and Toughness of Nb-Si Alloys", D.M. Herman and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

534."Shock Response of a Zr-based Bulk Metallic Glass", F. Yuan, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

535."Mechanical Characterization of Implantable Composite Leadwires to be used in Next Generation Neuroprostheses Systems", R. Varadarajan, B. Smith, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

536."Effects of Temperature and Loading Rate on Mechanical Behavior of Calcium-based Bulk Metallic Glass", J. Caris and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

537."Dynamic Compression Behavior of Zirconium- and Iron-based Bulk Metallic Glasses", G. Sunny, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

538."Effects of Load Ratio, R, and Temperature on High Cycle Fatigue Behavior of Nanostructured $Al_{89}Gd_7Ni_3Fe_1$ Composite" A.D. El-Shabasy, H.A. Hassan, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

539."Effects of Changes in Test Temperature and Notch Radius on Fracture and Fatigue Crack Growth of Nano-Composite Aluminum Alloys", H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 17-18, 2008.

540.**"Fracture Studies on UT Bonded Mg-based Glasses", J.J. Lewandowski, DARPA-Boeing Review, DARPA, Arlington, VA, April 18, 2008.

541.**"Flow and Fracture Behavior of Metallic Glasses and Composites", J.J. Lewandowski, Naval Research Laboratory, Washington, DC, May 1, 2008.

542.**"Microstructural Effects on Fracture and Fatigue of 5xxx Aluminum Alloys for Naval Applications", J.J. Lewandowski, ONR Review – Woods Hole, MA, May 28, 2008.

543."Pressure Effects on the Flow Stress of a Zr-based Bulk Metallic Glass", F. Yuan, V. Prakash, and J.J. Lewandowski, International Congress and Exposition on Experimental and Applied Mechanics – SEM XI, Paper # 336, Orlando, FLA, June 4, 2008.

544."Spall Strength of a Zr-based Bulk Metallic Glass", F. Yuan, V. Prakash, and J.J. Lewandowski, International Congress and Exposition on Experimental and Applied Mechanics – SEM XI, Paper # 335, Orlando, FLA, June 5, 2008.

545."Fracture and Fatigue Crack Growth of Nano-Composite Aluminum Alloys", H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, 2008 International Conference on Tungsten, Refractory and Hardmetals VII, Washington, D.C., June 9, 2008.

546."High Cycle Fatigue Behavior of Nano-structured Composite Produced via Extrusion of Amorphous $Al_{89}Gd_7Ni_3Fe$ Powders", A.B. El-Shabasy, H.A. Hassan, and J.J. Lewandowski, 2008 Int'l Conf. on Tungsten, Refractory & Hardmetals VII, Washington, D.C., .June 9, 2008.

547."Effects of Changes in Test Temperature on Toughness of Bulk Metallic Glass/W Composites", A. Vormelker, H.A. Hassan, L. Kecskes, and J.J. Lewandowski, 2008 International Conference on Tungsten, Refractory & Hardmetals VII, Washington, D.C., .June 12, 2008.

548.**"Dynamic and Shock Response of a Zr-based BMG", G. Sunny, F. Yuan, V. Prakash, and J.J. Lewandowski, Los Alamos National Laboratory, Los Alamos, NM, June 13, 2008.

549.**"Effects of Heat Treatment on Structure Evolution and Mechanical Behavior of Cu-15Ni-8Sn", J. Caris and J.J. Lewandowski, LANL, Los Alamos, NM, June 13, 2008.

550.**"Flow and Fracture Studies on Fe-based BMGs", J.J. Lewandowski, ONR Steels Review, Arlington, VA, July 15, 2008.

551.**"Evolving Protocol for Qualification Testing of Implantable Cables", J.J. Lewandowski, J J.H. Payer, R. Varadarajan, H. Ha, ASM Conference on Matls and Processes for Medical Devices: Opportunities for Next Generation Implants, Cleveland, OH, August 7, 2008.

552.**"Evolving Protocol for Qualification Testing of Implantable Cables", J.J. Lewandowski, J.H. Payer, R. Varadarajan, H. Ha, Cleveland FES Mtg, Cleveland, OH, August 20, 2008.

553."Effects of Notch Radius, Test Temperature and Mixed Mode Loading on the Toughness of a Nano-Structured Al Composite", H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, Materials Science and Technology 2008 Conference, Pittsburgh, PA, October 5, 2008.

554."Fracture and Fatigue of $Fe_{78}Si_9B_{13}$ Metallic Glass Ribbons", A.B. El-Shabasy and J.J. Lewandowski, MS&T 2008 Conference, Pittsburgh, PA, October 5, 2008.

555."Fatigue and Toughness of Nb-Si Alloys", D.M. Herman and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 5, 2008.

556."Effects Fatigue Behavior, Strength, and Structure Evolution of Cu-15Ni-8Sn", J. Caris, R. Varadarajan, J.J. Stephens, J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 6, 2008.

557."Effects of Superimposed Pressure on Flow of Metallic Glass", J. Caris and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 7, 2008.

558."Effects of Temperature, Composition on Mechanical Properties of Al-Based Amorphous Alloys", C.K. Huang and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 7, 2008.

559."Experiments on High Strain-Rate Loading of a Zirconium-based Bulk Metallic Glasses", G. Sunny, V. Prakash, and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 7, 2008.

560."Effects of Thermal Exposure and Test Temperature on Structure Evolution and Viscosity of an Iron-based Metallic Glass", A. Shamimi Nouri and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 7, 2008.

561."Effects of Changes in Viscosity on Flow Characteristics", L. Deibler and J.J. Lewandowski, MS&T 2008, Pittsburgh, PA, October 7, 2008.

562.**"Fracture and Fatigue of Implantable Cables", J.J. Lewandowski, R. Varadarajan, and B, Smith, MS&T 2008, Pittsburgh, PA, October 8, 2008.

563.**"Effects of Changes in Test Temperature and Strain Rate on Flow Stress and Friction Coefficient Relevant to Friction Stir Welding Conditions", J.J. Lewandowski, ONR Friction Stir Science and Technology Review Mtg, Hedgesville, WV, October 22, 2008.

564.**"Fracture and Fatigue of Niobium Silicide Alloys", J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 3, 2008.

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565.**"Flow and Fracture Behavior of Metallic Glasses", J.J. Lewandowski, School of Materials – Arizona State University, Tempe, AZ, January 16, 2009.

566.**"Fracture and Fatigue of Advanced Nb-Si Alloys", J.J. Lewandowski, TMS Annual Meeting, San Francisco, CA, February 17, 2009.

567.**"Intrinsic and Extrinsic Factors Affecting the Plasticity/Toughness of BMGs", J.J. Lewandowski, TMS Annual Meeting, San Francisco, CA, February 18, 2009.

568."Endurance Testing of Implantable Cables for Networked Neuroprothesis Systems", R. Varadarajan, B. Smith, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

569."Effects of Changes in Viscosity on Fracture Surface Appearance", L. Deibler and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

570."Intrinsic and Extrinsic Toughening of Metallic Glass", A. Shamimi Nouri and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

571."Tough to Brittle Transition in a Ti-based Metallic Glass", X.J. Gu, S.J. Poon, G.J Shiflet and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

572."High Temperature Deformation Behavior of a Zr-based Bulk Metallic Glass", D. Li, A. Shamimi Nouri, L.O. Ovidi and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

573."In Situ Phase Evolution of Cu-15Ni-8Sn with Thermal Exposure", J.B. Caris, D. Hovis and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

574."Microstructure and Mechanical Properties Evolution of Sensitized 5xxx Alloys", J. Brosi, D. Li and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

575."Effects of Changes in Chemical Composition, Test Temperature and Heat Treatment on Mechanical Properties of Aluminum-based Amorphous Alloy Ribbons", C.K. Huang and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

576."Dynamic Compression Behavior of Zirconium and Iron-based Bulk Metallic Glasses", N. Parikh, G. Sunny, V. Prakash and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

577."Dynamic Fracture of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

578."High Strain Rate/Temperature Experiments Relevant to Friction Stir Welding", S. Dike, V. Prakash and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 16, 2009.

579.**"Microstructural Effects on Fracture and Fatigue of 5xxx Aluminum Alloys for Naval Applications", J.J. Lewandowski, ONR Review – Woods Hole, MA, May 29, 2009.

580.**"Processing and Mechanical Behavior Studies on Materials", J.J. Lewandowski, APT All Hands Meeting, VA Learning Exchange, Cleveland, OH, June 1, 2009.

581."Dynamic Fracture of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash and J.J. Lewandowski, SEM Annual Conference on Experimental and Applied Mechanics, Albuquerque, NM, June 1, 2009.

582."High Loading Rate Fracture of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash and J.J. Lewandowski, SEM Annual Conference on Experimental and Applied Mechanics, Albuquerque, NM, June 3, 2009.

583."Effects of Strain-rate and Pressure in a Zr-based Bulk Metallic Glass", G. Sunny, F. Yuan, V. Prakash and J.J. Lewandowski, SEM Annual Conference on Experimental and Applied Mechanics, Albuquerque, NM, June 4, 2009.

584.**"Mechanical Behavior of Materials", J.J. Lewandowski, ASM Teachers Camp, CWRU, Cleveland, OH, June 16, 2009.

585.**"Flow and Fracture Behavior of Metallic Glasses", J.J. Lewandowski, AFRL, WPAFB, Dayton, OH, June 30, 2009.

586.**"Size and Chemistry Effects on Plasticity/Toughness of BMGs", J.J. Lewandowski, ONR Steels Review, Arlington, VA, July 14, 2009.

587.**"Nitinol Projects: Ohio Third Frontier Funding", J.J. Lewandowski, Cleveland Clinic/NASA Glenn/CWRU Meeting, NASA Glenn Research Center, Cleveland, OH, August 17, 2009.

588.**"Center for Mechanical Characterization of Materials", J.J. Lewandowski, CSE Visiting Committee, CWRU, Cleveland, OH, September 18, 2009.

589.**"Center for Mechanical Characterization of Materials", J.J. Lewandowski, General Dynamics Electric Boat, Groton, CT, October 1, 2009.

590.**"High Strain Rate Studies Relevant to Friction Stir Welding", J.J. Lewandowski, ONR Friction Stir Welding Review, York, PA, October 21, 2009.

591."Effects of Sensitization on Fracture and Fatigue of 5xxx Alloys", J. Brosi and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 27, 2009.

592."Model Experiments for Viscosity Effects on Fracture Surface Appearance", L. Deibler and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 28, 2009.

593."Effects of Changes in Chemistry, Strain Rate, Test Temperature on Flow/Fracture of Al-Gd-Ni Metallic Glass, C.K. Huang, J.J. Lewandowski, MS&T, Pittsburgh, PA, October 28, 2009.

594."Fracture and Fatigue of Implantable Electrodes", B. Benini and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 28, 2009.

595."Effects of Changes in Strain Rate on Fracture Toughness of a Zr-based BMG", G. Sunny, V. Prakash, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 28, 2009.

596."Effects of Changes in Test Temperature and Strain Rate on Flow Stress of HSLA-65 for Friction Stir Welding Applications", S. Dike, V. Prakash, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 29, 2009.

597.**"Fracture and Fatigue of Implantable Electrodes for Biomedical Applications", J.J. Lewandowski, Composites at Lake Louise, Lake Louise, Canada, October 29, 2009.

598.**"Microstructure and Stress State Effects on Fracture and Fatigue of Structural Materials", J.J. Lewandowski, Exxon-Mobil, Houston, TX, November 19, 2009.

599.**"AA6061 Cylinder Liner Investigation", J.K. Brosi, N.J.H. Holroyd, and J.J. Lewandowski, Cobham Aerospace, Westminster, MD, December 10, 2009.

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600.**"Ultra-High Temperature Amorphous Metals: INTRINSIC and EXTRINSIC Approaches to Discovery and Processing of Tough Hybrids", J.J. Lewandowski, AFOSR High Temperature Aerospace Materials Program Review, Arlington, VA, February 4, 2010.

601."Center for Mechanical Characterization of Materials", J.J. Lewandowski and C.J. Tuma, CWRU Chapter Society for Biomaterials, Cleveland, OH, February 10, 2010.

602."Mechanical Behavior of Implantable Conducting Cables", R. Varadarajan, L.O. Vatamanu, C. Tuma, B. Smith, and J.J. Lewandowski", CWRU Chapter Society for Biomaterials, Cleveland, OH, February 10, 2010.

603."Effects of Lamination on Mechanical Behavior of a Nano-structured Aluminum Composite", H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 15, 2010.

604."Fracture and Fatigue of Fe-based Metallic Glass Ribbons", A.B. El-Shabasy , H.A. Hassan, and J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 15, 2010.

605."Model Experiments to Mimic Fracture Surface Features in Metallic Glasses', L.A. Diebler and J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 15, 2010.

606.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 15, 2010.

607."Model Experiments to Mimic Fracture Surface Features in Metallic Glasses", L.A. Diebler and J.J. Lewandowski, TMS Annual Meeting, Seattle, WA, February 17, 2010.

608.**"Mechanical Characterization Facility at CWRU", J.J. Lewandowski, Fort Wayne Metals, Ft. Wayne, IN, April 1, 2010.

609.**"Mechanical Behavior of Implantable Conducting Cables", J.J. Lewandowski, Dept. Materials Science and Engineering, Purdue University, West Lafayette, IN, April 2, 2010.

610."Model Experiments to Mimic Fracture Surface Features in Metallic Glasses " L.A. Diebler and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

611."Effects of Thermal Exposures on Delamination in Short Transverse Direction of 5456-H116 and 5083-H116 Al-Mg Alloys", J. Brosi, D. Li, C. Tuma, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

612."Tension and Fatigue Behavior of Wires for Biomedical and Aerospace Applications", B. Benini and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

613."High Loading Rate Fracture of a Zr-based Bulk Metallic Glass", G. Sunny, V. Prakash, and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

614."Effects of Changes in Chemistry on Mechanical Properties and Fatigue Behavior of Al-based Amorphous Alloy Ribbons", C.K. Huang and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

615."Thermomechanical Processing and Atomic Structure of a Zr-based Bulk Metallic Glass", J. Caris and J.J. Lewandowski, Research SHOWCASE, CWRU, Cleveland, OH, April 15, 2010.

616."Modeling the Tensile Fracture Behavior of Metallic Glasses", A.J. Zaddach, L. Deibler, and J.J. Lewandowski, SOURCE Symposium, CWRU, Cleveland, OH, April 16, 2010.

617.**"Flow and Fracture of Advanced Materials Under Extreme Conditions", J.J. Lewandowski, Lawrence Livermore National Lab, Livermore, CA, April 26, 2010.

618.**"Mechanical Characterization Facility at CWRU", J.J. Lewandowski, Raydiance, Inc., Petaluma, CA, April 27, 2010.

619.**"Effects of Long-Term (10,000 hrs) Intermediate Thermal Exposure on Fracture and Fatigue of 5xxx Alloys", J.J. Lewandowski,ONR Review–Woods Hole, MA, May 27,2010.

620.**"Microstructure and Stress State Effects on Fatigue and Dynamic Fracture of Lightweight Metallic Systems", J.J. Lewandowski, 47th Sagamore Army Materials Research Conference on Advanced Lightweight Metals Technology, St. Michaels, MD, June 16, 2010.

621.**"Pressure Effects on Bulk Metallic Glasses", J.J. Lewandowski, Kavli Institute for Theoretical Physics Conference on Emerging Concepts in Glass Physics, UC Santa Barbara, Santa Barbara, CA, June 24, 2010.

622.**"Flow and Fracture of Metallic Glasses", J.J. Lewandowski, Keynote Presentation at ECI Conference on Materials Immune to Irradiation – I, Vail, CO, August 26, 2010.

623.**"Ultahigh Temperature Amorphous Metals: Intrinsic/Extrinsic Approaches to Discovery and Processing of Tough Hybrids", J.J. Lewandowski, 25th Technical Conf. of American Society Composites – Nanomaterials for Structures, Dayton, OH, September 21, 2010.

624.**"Mechanical Behavior of Aerospace Materials", J.J. Lewandowski, OAI Industry Day, CWRU, Cleveland, OH, October 14, 2010.

625."Effects of Pressure/Stress State on Metallic Glasses", J.B. Caris and J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

626."Effects of Changes in Chemistry on Fatigue of Al-Gd-Ni-X Metallic Glasses" C.K. Huang and J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

627."Model Experiments to Mimic Fracture Surfaces in Metallic Glasses", L.A. Deibler and J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

628."Chemistry and Hot Deformation Effects on Elastic Constants and Toughness of Ca-BMG", J.B. Caris, O. Senkov, D.B. Miracle, J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

629."Effects of Changes in Test Temperature on Viscosity and Fracture Behavior of Metallic Glasses", L.A. Deibler and J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

630.“Fracture and Fatigue Behavior of Nano-Crystalline Al Produced via Extrusion of Amorphous Al Alloy Powders”, J.J. Lewandowski, H.A. Hassan, and A.B. El-Shabasy, MS&T, Houston, TX, October 18, 2010.

631.”Changes in Chemistry and Testing Temperature Effect on Mechanical Behavior of Amorphous Al-Based Ribbons”, C.K. Huang and J.J. Lewandowski, MS&T, Houston, TX, October 18, 2010.

632.**”Fracture and Fatigue of Advanced Refractory Metal Systems”, J.J. Lewandowski, MS&T, Houston, TX, October 20, 2010.

633.**”Mechanical Properties of AS800/AS800 Si3N4 Braze Joints using Ag-(Zr, Hf) Fillers” J.B. Caris, J.J. Stephens, Jr., J.J. Lewandowski, MS&T, Houston, TX, October 20, 2010.

634.“Fracture and Fatigue Behavior of Wires Used in the Biomedical Industry”, J.J. Lewandowski, R. Varadarajan, and B. Benini, MS&T, Houston, TX, October 20, 2010.

635.**”Effects of Changes in Test Temperature and Strain Rate on Flow Stress and Friction Coefficient Relevant to Friction Stir Welding Conditions”, J.J. Lewandowski, ONR Program Review, Naval Postgraduate School, Monterey, CA, October 28, 2010.

636.**“Mechanical Behavior of Advanced Materials for Structural and Biomedical Applications”, J.J. Lewandowski, Dept. Materials Science and Engineering, Alfred University, Alfred, NY, November 18, 2010.

637.**”Flow and Fracture of Metallic Glasses”, J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 2, 2010.

638.**”Effects of Manufacturing Changes on 6061 Cylinder Liners”, J.J. Lewandowski, N.J.H. Holroyd, and K. Kulpinski, Cobham Aerospace, Westminster, MD, December 10, 2010.

639.**”Effects of Long-Term (e.g. up to 10,000 hrs) Intermediate Temperature Exposures on Fracture and Fatigue of 5xxx Al-Alloys”, J.J. Lewandowski, Naval Surface Weapons Center - Carderock, West Bethesda, MD, December 14, 2010.

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640.**“Fracture and Fatigue of Advanced Materials for Structural and Biomedical Applications”, J.J. Lewandowski, Biomedical Engineering Seminar Series, Case Western Reserve University, Cleveland, OH, February 10, 2011.

641.“Measurements of Viscosity in Metallic Glasses”, L.A. Deibler and J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, February 27, 2011.

642.**“Fracture Toughness of Metallic Glasses”, J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, March 1, 2011.

643.“Temperature Effects on Flow of Several Metallic Glasses”, L.A. Deibler and J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, March 3, 2011.

644.**“Fracture and Fatigue of Metallic Glasses”, J.J. Lewandowski, Eighth International Conference on Bulk Metallic Glasses, Kwoloon, Hong Kong, May 16, 2011.

645.**"Effects of Changes in Test Temperature and Strain Rate on Flow and Fracture of BMGs and Composites", J.J. Lewandowski, 2011 Taiwan Tech International Workshop on Metallic Glasses, National Taiwan University Science and Technology, Taipei, Taiwan, May 23, 2011.

646.**"Microstructure/Properties Evolution of Intermediate Temperature Sensitized Al-Mg Alloys", J.J. Lewandowski, ALCOA Tech Center, New Kensington, PA, June 17, 2011.

647.**"Manufacturing Studies on 6061 Cylinder Liners", K. Kulpinski, N.J.H. Holoryd, and J.J. Lewandowski, Carleton Technologies, Westminster, MD, June 23, 2011.

648.**"Microstructure/Mechanical Properties of Intermediate Temp Sensitized Al-Mg Alloy", J.J. Lewandowski, Army Research Lab, Aberdeen Proving Ground, MD, June 24, 2011.

649."Effects of Intermediate Temperature Long Term Exposure on Mechanical Behavior of 5083-H116 and 5456-H116", J.K. Brosi, M. Seifi, and J.J. Lewandowski, 1st Intl Conference on Integrated Computational Materials Engineering, Seven Springs, PA, July 11, 2011.

650."Ongoing Wire Laser Processing and Fatigue Studies", H. Lavvafi, J.R. Lewandowski, M.E. Lewandowski, D. Schwam, and J.J. Lewandowski, Cleveland Clinic – Medical Device Solutions, Cleveland, OH, August 18, 2011.

651.**"Pressure Effects on Flow and Fracture of Amorphous and Nano-Composite Materials", J.J. Lewandowski, E-MRS Meeting, Warsaw, Poland, September 20, 2011.

652.**"Flow and Fracture Behavior of Metallic Glasses", J.J. Lewandowski, RPI -Department of Materials Science and Engineering, Troy, NY, September 28, 2011.

653.**"Alloy/Heat Treatment Effects on Sensitization of 5XXX Al-Mg Alloys", J.J. Lewandowski, ONR Program Review, Arlington, VA, October 13, 2011.

654.**"Advanced Mechanical Testing of Amorphous Materials for CWMD", J.J. Lewandowski, DTRA Kickoff Meeting, University of Virginia, Charlottesville, VA, October 14, 2011.

655."The Effects of Laser Machining on Structure and Mechanical Properties of Micro-Channel Heat Exchanger Alloys", H. Lavvafi, J.J. Lewandowski, D. Schwam, M.E. Lewandowski and J.J. Lewandowski, MS&T, Columbus, OH, October 16, 2011.

656."Tension and Flex Bending Fatigue of Superelastic Nitinol", J.R. Lewandowski, B. Benini, M.D. Young, and J.J. Lewandowski, MS&T, Columbus, OH, October 17, 2011.

657."Flex Bending Fatigue of Amorphous Aluminum Alloys", C.K. Huang and J.J. Lewandowski, MS&T, Columbus, OH, October 18, 2011.

658."Effects of Sensitization on Fracture and Fatigue of 5XXX Al Alloys", S.M. Seifi, J.K. Brosi, and J.J. Lewandowski, MS&T, Columbus, OH, October 19, 2011.

659."Intermediate Strain Rate Testing for Single and Multiple Loading Sequence Testing on Bulk Materials", J.J. Lewandowski, MS&T, Columbus, OH, October 18, 2011.

660."Effects of Laser Machining on Structure and Fatigue of 316LVM Stainless Steel Wires", H. Lavvafi, J.R. Lewandowski, M.E. Lewandowski, D. Schwam, and J.J. Lewandowski, ICALEO – Int'l Congress on Applications of Lasers & Electro-Optics", Orlando, FLA, October 27, 2011.

661."The Effects of Laser Machining on Structure and Fatigue of Stainless Steel", H. Lavvafi, J.R. Lewandowski, M.E. Lewandowski, D. Schwam, and J.J. Lewandowski, Raydiance Teleconference, Cleveland, OH, November 28, 2011.

662.**"Manufacturing Studies on 6061 Cylinder Liners", K. Kulpinski, N.J.H. Holoryd, and J.J. Lewandowski, Carleton Technologies, Westminster, MD, December 13, 2011.

663.**"Alloy/Heat Treatment Effects on Sensitization of 5XXX Al-Mg Alloys", J.J. Lewandowski, NASA Langley Research Center, Newport News, VA, December 14, 2011.

664.**"Fracture and Fatigue Behavior of Nano-Crystalline Aluminum Alloys Produced via Extrusion of Amorphous Aluminum Alloy Powders", J.J. Lewandowski, NASA Langley Research Center, Newport News, VA, December 14, 2011.

665.**"Alloy/Heat Treatment Effects on Sensitization of 5XXX Al-Mg Alloys", J.J. Lewandowski, Naval Research Laboratory, Washington, DC, December 15, 2011.

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666."Tension and Flex Bending Fatigue of Superelastic Nitinol", J.R. Lewandowski, B. Benini, M.D. Young, and J.J. Lewandowski, NASA GRC, Cleveland, OH, January 6, 2012.

667."Nitinol Commercialization Accelerator – Ohio Third Frontier", J. Gbur, J.R. Lewandowski, H. Lavvafi, M. Young, D. Schwam, J.D. McGuffin-Cawley, M.V. Nathal, S. Padula II, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 12, 2012.

668.**"Microstructure and Stress State Effects on Fracture of Novel Materials", J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 13, 2012.

669."Effects of Ultrafast Laser Machining on Structure and Fatigue of 316 LVM Stainless Steel Wires", H. Lavvafi, J.R. Lewandowski, J. Gbur, D. Dudzinski, M. Young, D. Schwam, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 13, 2012.

670."Effects of Intermediate Temperature Long Term Exposure on Mechanical Behavior of 5083-H116 and 5456-H116", J.K. Brosi, S.M. Seifi, and J.J. Lewandowski, TMS Materials Innovation Gallery, TMS Annual Meeting, Orlando, FL, March 13, 2012.

671."Effects of Sensitization on Fracture and Fatigue of 5XXX Al Alloys", M. Seifi, J.K. Brosi, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 13, 2012.

672."Review of Pressure Effects on Flow and Fracture of Materials", J.J. Lewandowski, TMS Annual Meeting, Orlando, FL, March 14, 2012.

673.**"Translational Manufacturing Research", J.J. Lewandowski, TIMKEN R&D Center, Canton, OH, April 18, 2012.

674."Effects of Intermediate Temperature Long Term Exposure on Mechanical Behavior of 5083-H116 and 5456-H116", J.K. Brosi, S.M. Seifi, and J.J. Lewandowski, International Conference on Aluminum Alloys - ICAA, Pittsburgh, PA, May 4, 2012.

675.**"Layered Aluminum Systems with Improved Performance", J.J. Lewandowski, International Conference on Aluminum Alloys - ICAA, Pittsburgh, PA, May 4, 2012.

676."Effects of Intermediate Temperature Long Term Exposure on Mechanical Behavior of 5083-H116 and 5456-H116", J.K. Brosi, S.M. Seifi, and J.J. Lewandowski, 56th Annual SAS/ACS/AVS May Conference, Cleveland, OH, May 23, 2012.

677."Nitinol Commercialization Accelerator – Ohio Third Frontier", J. Gbur, J.R. Lewandowski, H. Lavvafi, M. Young, D. Schwam, J.D. McGuffin-Cawley, M.V. Nathal, S. Padula II, and J.J. Lewandowski, 56th Annual SAS/ACS/AVS May Conference, Cleveland, OH, May 23, 2012.

678.**"Emerging Areas of Research in Metals and Metallic Nanostructured Materials", J.J. Lewandowski, Panel Summary-NSF Workshop on Emerging Areas of Research in Metals and Metallic Nanostructures. UCSB, Santa Barbara, CA, June 14, 2012.

679.**"The Curriculum: What is the Core of Materials Science and Engineering?", J.J. Lewandowski, Panel Summary- NSF Workshop on Emerging Areas of Research in Metals and Metallic Nanostructures. UCSB, Santa Barbara, CA, June 14, 2012.

680.**"Progress Report on TMS Core Group", J.J. Lewandowski and G. Spanos, TMS Workshop, Chicago, ILL, July 14, 2012.

681.**"Discovery and Fundamentals of New Amorphous Metals/Composites with High-Performance Ballistic Properties", S.J. Poon, G.J. Shiflet, J.J. Lewandowski, and M. Widom, DTRA Program Review, Alexandria, VA, July 23, 2012.

682.**"Report on TMS Core Group", J.J. Lewandowski and G. Spanos, MS&T Board of Directors Meeting, Pittsburgh, PA, October 7, 2012.

683."Rotating Bending Fatigue and Flex Bending Fatigue of Nitinol and 316LVM Wires Used in the Biomedical Industry", J. Gbur, H. Lavvafi, M. Young and J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 8, 2012.

684."Parametric Studies on Femtosecond Laser Cutting of Ni-Ti Shape Memory Alloys", H. Lavvafi, J.L. Gbur, J.R. Lewandowski, M. Young, and J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 8, 2012.

685.**"Effects of Changes in Alloy Composition on Toughness of Ni-Ta-X Bulk Metallic Glass", J.J. Lewandowski, S.M Seifi,, S.J. Poon, and G.J. Shiflet, MS&T Meeting, Pittsburgh, PA, October 9, 2012.

686."Processing and Properties of Metallic Glass Micro-Wires", J. Yi, H.J. Neilson, and J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 9, 2012.

687.**"Fracture and Fatigue of Amorphous Metals and Nano-Composites", J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 10, 2012.

688."Effects of Sensitization on Fatigue Crack Growth of 5XXX Al Alloys", S.M. Seifi, J.K. Brosi, and J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 10, 2012.

689."Effect of Surface Hardening by Low-Temperature Carburization on Crack Growth in Hydrogen Charged 316L Austenitic Stainless Steel", D. Wang, H. Kahn, J.J. Lewandowski, F. Ernst, G.M. Michal, and A.H. Heuer, MS&T Meeting, Pittsburgh, PA, October 10, 2012.

690."Parametric Studies on Femtosecond Laser Cutting of Ni-Ti Shape Memory Alloy", H. Lavvafi, M. Young, and J.J. Lewandowski, MS&T Meeting, Pittsburgh, PA, October 11, 2012.

691."Bending Fatigue of Laser Machined 316LVM and Nitinol Wires", J.L. Gbur, H. Lavvafi, M. Young, and J.J. Lewandowski, ASTM Committee E08 on Fatigue and Fracture Student Presentation Competition, Atlanta, GA, November 15, 2012.

692.**"Stress State and Temperature Effects on Flow and Fracture of Bulk Metallic Glasses", J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 26, 2012.

693."Nitinol Commercialization Accelerator – Ohio Third Frontier", J. Gbur, J.R. Lewandowski, H. Lavvafi, M. Young, D. Schwam, J.D. McGuffin-Cawley, M.V. Nathal, S. Padula II, and J.J. Lewandowski, National Additive Manufacturing Innovation Institute-NAMII Engagement Summit, Youngstown, OH, December 13, 2012.

694."Center for Mechanical Characterization of Materials", J.J. Lewandowski and C.J. Tuma, National Additive Manufacturing Innovation Institute-NAMII Engagement Summit, Youngstown, OH, December 13, 2012.

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695."Rotating Bending and Flex Bending Fatigue of Oxide-Finished Nitinol Wire", J.L. Gbur and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 4, 2013.

696."Fatigue Analysis of Laser-Treated Nitinol Wires", J.L. Gbur and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 4, 2013.

697."Nitinol Commercialization Accelerator – Ohio Third Frontier", J. Gbur, J.R. Lewandowski, H. Lavvafi, M. Young, D. Schwam, J.D. McGuffin-Cawley, M.V. Nathal, S. Padula II, and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 4, 2013.

698.**"Flow and Fracture Studies on Metallic Glasses", J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 5, 2013.

699.**"Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and J. Beuth, NAMII Kickoff Meeting, Youngstown, OH, April 3, 2013.

700."Effects of Changes in Temperature and Strain Rate on Mechanical Behavior of BMG/ Composites", J. Booth, S.M. Seifi, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

701."Effects of Intermediate Temperature Long Term Exposure on Degradation of Mechanical Behavior of Al-Mg 5XXX Alloys", S.M. Seifi and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

702.“Size Effects on Strength and Plasticity of Metallic Glasses”, J. Yi, H. Neilson, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

703.“Effects of Microstructure on the Fracture and Fatigue Crack Growth of Ti-48Al-2Nb-2Cr Next Generation Turbine Blade Material”, M. Dahar and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

704.“Mechanical Behavior of Nano-structured Aluminum Alloys”, H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

705.“Effects of Composition Changes on Strength, Bend Ductility, Toughness, and Flex Bending Fatigue of Fe-based Metallic Glass Ribbons”, A.B. El-Shabasy, H.A. Hassan, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

706.“Rotating Bending and Flex Bending Fatigue of Oxide-Finished Nitinol Wire”, J.L. Gbur and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

707.“Nitinol Commercialization Accelerator – Ohio Third Frontier”, J. Gbur, J.R. Lewandowski, H. Lavvafi, M. Young, D. Schwam, J.D. McGuffin-Cawley, M.V. Nathal, S. Padula II, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 12, 2013.

708.**”Fracture and Fatigue of Nb-Silicide Composites”, J.J. Lewandowski, ECI Conference – Beyond Ni-Based Superalloys, Bad Berneck (Bavaria), Germany, May 14, 2013.

709.“Mechanical Behavior of Nano-structured Composites”, H.A. Hassan, A.B. El-Shabasy, and J.J. Lewandowski, 57th Annual SAS/ACS/AVS May Conference, Cleveland, OH, May 15, 2013.

710.“Effects of Composition Changes on Mechanical Behavior of Fe-based Metallic Glass Ribbons”, A.B. El-Shabasy, H.A. Hassan, and J.J. Lewandowski, 57th Annual SAS/ACS/AVS May Conference, Cleveland, OH, May 15, 2013.

711.**”Rapid Qualification Methods for Powder Bed Direct Metal AM Processes”, J.J. Lewandowski, CWRU Board of Trustees Mtg, CWRU, Cleveland, OH, May 31, 2013.

712.**“Discovery and Fundamentals of New Amorphous Metals/Composites with High-Performance Ballistic Properties”, S.J. Poon, G.J. Shiflet, J.J. Lewandowski, and M. Widom, DTRA Program Review, Alexandria, VA, July 23, 2013.

713.”CWRU-NAMII Research Update”, M. Dahar, S.M Seifi, and J.J. Lewandowski, CWRU, Cleveland, OH, August 19, 2013.

714.“Emerging Novel Materials/Processes”, J.J. Lewandowski, Armington Professorship Chairing Ceremony, CWRU, Cleveland, OH, September 10, 2013.

715.“Fracture and Fatigue of Implantable Electrodes”, J.J. Lewandowski, Kyocera Workshop on Medical Applications”, CWRU, Cleveland, OH, September 12, 2013.

716.“Materials Fatigue and Characterization”, J.J. Lewandowski, Kyocera Workshop on Energy and Advanced Materials”, CWRU, Cleveland, OH, September 12, 2013.

717.**"Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and J. Beuth, NAMII Program Management Meeting, Youngstown, OH, October 9, 2013.

718."Characterization of Additive Manufactured Ti-6Al-4V: ARCAM Electron Beam Process", M. Dahar, M. Seifi, and J.J. Lewandowski, NAMII Program Management Meeting, Youngstown, OH, October 9, 2013.

719."Advanced Manufacturing and Mechanical Reliabilty Center (AMMRC)", J.J. Lewandowski and C. Tuma, NAMII Program Management Meeting, Youngstown, OH, October 9, 2013.

720."Effects of Intermediate Temperature Long Term Exposure on Degradation of Mechanical Behavior of Al-Mg Alloys", S.M. Seifi, J.K. Brosi, and J.J. Lewandowski, NAMII Program Management Meeting, Youngstown, OH, October 9, 2013.

721.**"AA6061 Cylinder Liner Research", J.J. Lewandowski and N.J.H. Holroyd, Luxfer USA, Riverside, CA, October 21, 2013.

722."Effects of Changes in Temperature and Strain Rate on Mechanical Behavior of Zr-based Bulk Metallic Glasses and BMG Composites", J. Booth, M. Seifi, J.J. Lewandowski, and J.W. Carter, MS&T, Montreal, Canada, October 29, 2013.

723."Fracture and Fatigue of Wires Used in the Biomedical Industry", J.L. Gbur, H. Lavvafi, and J.J. Lewandowski, MS&T, Montreal, Canada, October 30, 2013.

724."Effects of Changes in Alloy Composition on Toughness of Ni-Ta-X Bulk Metallic Glass", S.M. Seifi, S.J. Poon, G.J. Shiflet, M. Widom, and J.J. Lewandowski, MS&T, Montreal, Canada, October 30, 2013.

725."Effects of Extended Thermal Exposures on the High Cycle Fatigue Behavior of 5456-H116", A.B. El-Shabasy, H.A. Hassan, J.J. Lewandowski, MS&T, Montreal, Canada, October 30, 2013.

726."Effects of Intermediate Temperature Long Term Exposures on Degradation of Mechanical Behavior of Al-Mg Alloys", S.M. Seifi, J.K. Brosi, and J.J. Lewandowski, MS&T, Montreal, Canada, October 30, 2013.

727."The Fatigue Behavior of AZ91D/SiCp and 2XXX/SiCp Composites", H.A. Hassan and J.J. Lewandowski, MS&T, Montreal, Canada, October 30, 2013.

728."Mechanical Property Evolution and Thermal Remediation of Al-Mg Alloys after Long Time Low/Intermediate Temperature Exposures", S.M. Seifi and J.J. Lewandowski, ASTM Symposium on Fatigue & Fracture, ASTM Annual Mtg, Jacksonville, FL, November 13, 2013.

729."The Fatigue Strength of Nitinol and Tensile Testing Methods", M. Jaffee, J. Gbur, and J.J. Lewandowski, STEM Research Symposium, Hawken HS, Gates Mills, OH, November 18, 2013.

730."Fatigue Crack Growth and Thermal Remediation of Al-Mg Alloys After Long Time Low Temperature Exposure", S.M. Seifi and J.J. Lewandowski, Fall MRS Meeting, Boston, MA, December 3, 2013.

731."Toughening of Metallic Glasses by Deflective Toughening Mechanisms", J. Yi and J.J. Lewandowski, Fall MRS Meeting, Boston, MA, December 5, 2013.

732."Effects of Changes in Stress State and Sample Size on Strength/Plasticity of Metallic Glasses", H.J. Neilson, J. Yi, J.J. Lewandowski, MRS Mtg, Boston, MA, December 5, 2013.

733.**"Flow and Fracture Behavior of Metallic Glasses", J.J. Lewandowski, Dept. Materials Science and Engineering, Carnegie Mellon University, Pittsburgh, PA, December 6, 2013.

734."Behavior of Emerging Novel Materials", J.J. Lewandowski, IGNITE with Faculty, Case Western Reserve University, Cleveland, OH, December 10, 2013.

735.**"3D Printing with Metals Webinar", J.J. Lewandowski and Todd Rockstroh, Metal Forming Magazine, December 12, 2013.

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736."Fracture and Fatigue Crack Growth Behavior of Cast Titanium Aluminide", S.M. Seifi, M. Dahar, P.R. Subramanian, B.P. Bewlay, and J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, February 17, 2014.

737."Changes in Microstructure of Zr-Based Bulk Metallic Glass Composites as a Function of Deformation Temperature", J. Booth, J.J. Lewandowski, and J.W. Carter, TMS Annual Meeting, San Diego, CA, February 17, 2014.

738.**"Flow and Fracture Studies on Bulk Metallic Glasses", J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, February 17, 2014.

739."Fatigue Crack Growth Behavior and Thermal Remediation of Al-Mg Alloys after Long Time Low Temperature Exposures", S.M. Seifi and J.J. Lewandowski, TMS Annual Meeting, San Diego, CA, February 18, 2014.

740."Temperature Effects on Mechanical Behavior of Zr-Based BMG Composites", J. Booth, J.J. Lewandowski, and J.W. Carter, TMS Annual Meeting, San Diego, CA, February 20, 2014.

741.**"Damage Tolerance of AA 6061 Liners – Melt Spinning vs Flow Forming". N.J.H. Holroyd and J.J. Lewandowski, Innoval, Banbury, UK, March 12, 2014.

742.**"Damage Tolerance of AA 6061 Liners – Domes". N.J.H. Holroyd and J.J. Lewandowski, Innoval, Banbury, UK, March 12, 2014.

743.**"Damage Tolerance of AA 6061 Liners – Tubes and Liner Materials". N.J.H. Holroyd and J.J. Lewandowski, Innoval, Banbury, UK, March 12, 2014.

744.**"Damage Tolerance of AA 6061 Liners – Production Domes". N.J.H. Holroyd and J.J. Lewandowski, Innoval, Banbury, UK, March 12, 2014.

745.**"Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and J. Beuth, NAMII Program Management Meeting, Youngstown, OH, March 18, 2014.

746.“Characterization of Additive Manufactured Ti-6Al-4V: Electron Beam Process”, M. Dahar, M. Seifi, J. Carter, and J.J. Lewandowski, NAMII PM Mtg, Youngstown, OH, March 19, 2014.

747.“Advanced Manufacturing and Mechanical Reliabilty Center (AMMRC)”, J.J. Lewandowski and C. Tuma, NAMII Program Management Meeting, Youngstown, OH, March 19, 2014.

748.“Effects of Changes in Temperature and Loading Rate on Damage and Fracture of BMG/ Composites”, J. Booth, J.W. Carter, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

749.“Thermal Exposure Effects on Fracture and Fatigue of Al-Mg Naval Alloys”, S.M. Seifi and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

750.“The Ductilization and Toughening of Metallic Glasses”, J. Yi, W.H. Wang, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

751.“The Fracture and Fatigue Crack Growth Behavior of Ti-48Al-2Nb-2Cr Next Generation Turbine Blade Material”, M. Dahar, B.P. Bewlay, S.M. Seifi, and JJ Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

752.“Fracture and Fatigue of Ti-6Al-4V Produced by Additive Mfg”, M. Dahar, S.M. Seifi, J. Carter, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

753.“Advanced Manufacturing and Mechanical Reliability Center (AMMRC)”, C.J. Tuma and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

754.“Fracture and Fatigue of Wires for Biomedical Applications”, J.L. Gbur and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

755.“Weibull Modulus and Hardness/Bend/Tensile Strength of Ni-Ta-X Metallic Glasses”, H.J. Neilson and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

756.“Small Scale Production of Nitinol through Vacuum Arc Melting and Indirect Extrusion”, O. Bobanga, R. Tomazin, M. Daniil, A. Austen, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 18, 2014.

757.**”Flow and Fracture Studies on Metallic Glasses”, J.J. Lewandowski, Institute of Mechanics – Chinese Academy of Sciences, Beijing, China, May 29, 2014.

758.**”Flow and Fracture Studies on BMGs and Nano-composites”, J.J. Lewandowski, Institute of Physics – Chinese Academy Sciences, Beijing, China, May 30, 2014.

759.**”Flow and Fracture Studies on Metallic Glasses”, J.J. Lewandowski, J. Yi, and W.H. Wang, BMG-X, Shanghai, China, June 5, 2014.

760.**”Flow and Fracture Toughness Studies on Metallic Glasses”, J.J. Lewandowski, Beijing University of Science and Technology, Beijing, China, June 7, 2014.

761.“Rapid Qualification Methods for Powder Bed Metal AM”, J. Beuth, J. Lewandowski, O. Harrysson, B. Stucker, N. Klingbeil, AEROMAT 2014, Orlando, FL, June 16, 2014.

762.**"Microstructure and Mechanical Properties of Intermediate Temp Sensitized Al-Mg Alloys", J.J. Lewandowski, Naval Surface Warfare Center, Bethesda, MD, July 25, 2014.

763.**"Discovery and Fundamentals of New Amorphous Metals/Composites with High-Performance Ballistic Properties", S.J. Poon, G.J. Shiflet, J.J. Lewandowski, and M. Widom, DTRA Program Review, Alexandria, VA, July 28, 2014.

764."Investigating the Temperature Dependence of Precipitation-Induced Mechanical Stability of Al-5456 and Al-5083 in Marine Environments"**,** J. Gaies, W. Golumbfskie, J. Lewandowski, M. Taheri, UVa Corrosion Review, Charlottesville, VA, August 7, 2014.

765."EBSD Analysis for Microstructure Characterization of Zr-based Bulk Metallic Glass Composites"**,** J. Booth, J. Lewandowski, J.W. Carter, M & M Mtg, Hartford, CT, August 7, 2014.

766."Melt Pool Characterization for Selective Laser Melting of Ti-6Al-4V Pre-alloyed Powder", H. Gong, H. Gu, K. Zeng, J.J.S. Dilip, D. Pal, B. Stucker, D. Christiansen, J. Beuth, J. Lewandowski, Sold Freeform Fabrication Symposium, Austin, TX, August 13, 2014.

767."Advanced Manufacturing and Mechanical Reliability Center (AMMRC) at CWRU", J.J. Lewandowski, Naval Surface Warfare Center, Carderock, Md, September 12, 2014.

768.**"Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and J. Beuth, NAMII Webinar, CWRU, OH, September 16, 2014.

769.**"Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and J. Beuth, NAMII PMR, Youngstown, OH, September 24, 2014.

770."Sensitization Effects on Fracture and Fatigue of Al-Mg Naval Alloys", S.M. Seifi and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 13, 2014.

771."Fracture Toughness of BMG Composites", J. Booth, J.W. Carter, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 14, 2014.

772."Fracture and Fatigue Crack Growth Behavior of Cast Titanium Aluminide", M. Dahar, S.M. Seifi, B.P. Bewlay, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 14, 2014.

773."Fracture and Fatigue Crack Growth Behavior of Ti-6Al-4V Made by Electron Beam Melting – Influence of Process-Induced Defects", S.M. Seifi, M. Dahar, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 14, 2014.

774."Processing and Size Scale Effects on Plasticity of Metallic Glass Fibers", H.J. Neilson, J. Yi, W.H. Wang, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

775."Sub-scale Processing and Extrusion of Nitinol", J. Bobanga, M. Daniil, A. Austen, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

776."Fracture and Fatigue of Wires for Biomedical Applications", J. Gbur and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

777."Weibull Modulus of Hardness, Bend Strength, and Tensile Strength of Ni-Ta-Co-X Metallic Glass", H.J. Neilson and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

778."Microstructural Evaluation of Ti-6Al-4V Made by Electron Beam AM", M. Dahar, S.M. Seifi, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

779."Novel Manufacturing Techniques of Metallic Glass Fibers", H.J. Neilson, J. Yi, and J.J. Lewandowski, MS&T, Pittsburgh, PA, October 15, 2014.

780.**"Unique Flow, Fracture and Fatigue Behavior of Metallic Glasses – Potential Applications", J.J. Lewandowski, GE Global Research, Niskayuna, NY, October 23, 2014.

781."Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski, CWRU/NRL Webinar, Cleveland, OH, November 6, 2014.

782."Review: Fatigue and Fracture of Wires/Strands/Cables in Biomedical Applications", J.L. Gbur and J.J. Lewandowski, ASTM Committee E08 on Fatigue and Fracture Student Presentations, New Orleans, LA, November 9, 2014.

783."Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski, CWRU/ORNL Webinar, Cleveland, OH, November 11, 2014.

784."Fracture and Fatigue Crack Growth Behavior of Cast Titanium Aluminide", M. Dahar, S.M. Seifi, B.P. Bewlay, and J.J. Lewandowski, MRS Meeting, Boston, MA, December 3, 2014.

785."Processing and Size Scale Effects on Plasticity of Metallic Glass Fibers", H.J. Neilson, J. Yi, W.H. Wang, and J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 3, 2014.

786."Fracture Toughness of Bulk Metallic Glasses and Metallic Glass Composites", J.J. Lewandowski, J. Booth, and J.W. Carter, MRS Fall Meeting, Boston, MA, December 4, 2014.

787.**"Fracture and Fatigue of Ti-6Al-4V Manufactured via E-Beam Additive Manufacturing", J.J. Lewandowski, NASA Langley Research Center, Hampton, VA, December 9, 2014.

788.**"Forming Limit Diagrams for 304 Stainless Steel", J.J. Lewandowski, Soundwich, Cleveland, OH, December 12, 2014.

789."Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", J.J. Lewandowski and S.M. Seifi, ASTM Webinar, West Conshohocken, PA, December 17, 2014.

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790."Summary of JOM Paper and Sectioning of AM Parts", M. Seifi, M. Dahar, and J.J. Lewandowski, America Makes Team Webinar, Cleveland, OH, February 9, 2015.

791."High Density Ni-based Metallic Glasses Formed by Spark Plasma Sintering", H.J. Neilson, G. Shiflet, A. Peterson, S. Poon, J.J. Lewandowski, TMS Mtg, Orlando, FLA, March 16, 2015.

792."Microstructure and Mechanical Property Evolution during Tube Processing of Oxide Dispersion Strengthened (ODS) Ferritic Steels", E. Aydogan, O. Anderoglu, S.A. Maloy, K. Clarke, C.A. Yablinsky, T. Saleh, G.R. Odette, D. Hoezler, J.J. Lewandowski, I.E. Anderson, J.R. Rieken, and C. Lavender, TMS Annual Meeting, Orlando, FLA, March 16, 2015.

793.**"Effects of Pressure on Flow and Fracture of Materials", J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 17, 2015.

794.**"Structure Evolution and Hot Hardness of Co-Fe-Zr-B-Cu Magnetic Matls", S. Lan, M.A. Willard, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 17, 2015.

795."Fatigue Analysis of Nitinol and Beta Titanium Arch Wires", J. Gbur, B. Benini and J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 17, 2015.

796.**"Flow and Fracture Behavior of High Entropy Alloys", Y. Zhang, D. Li, P.K. Liaw, S.M. Seifi and J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 18, 2015.

797."Sensitization Effects on Fracture and Fatigue of Al-Mg Naval Alloys", S.M. Seifi, N.J.H. Holroyd and J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 18, 2015.

798."Fracture and Fatigue Crack Growth Behavior of Ti-6A-4V Made by Electron Beam Melting", S.M. Seifi, M. Dahar, R. Aman, O. Harrysson, J.L. Beuth, and J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 18, 2015.

799."Hot Microhardness Testing for Rapid Assessment of Mechanical Behavior, Microstructure Evolution, and Processing Windows", J.J. Lewandowski, TMS Annual Meeting, Orlando, FLA, March 19, 2015.

800."Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", CWRU/CMU Powder Bed Team, J.J. Lewandowski, America Makes Program Review, Youngstown, OH, April 14, 2015.

801."CWRU Facilities for ICME Enhanced Development of TiAl for Advanced Aerospace Components", J.J. Lewandowski, RTI MAI Kickoff Meeting, ATI, Albany, OR, April 16, 2015.

802.**"Fracture and Fatigue of Advanced Materials for Structural Applications", NETL, J.J. Lewandowski, Albany, OR, April 17, 2015.

803."Fatigue Analysis of Nitinol and Beta Titanium Arch Wires", J. Gbur, K.N. Gupta, I.A. Roth, B. Benini and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 17, 2015.

804."Advanced Manufacturing and Mechanical Reliability Center (AMMRC)", C.J. Tuma and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 17, 2015.

805."Thermal Exposure Effects on Fracture and Fatigue of Al-Mg Naval Alloys", S.M. Seifi and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 17, 2015.

806."High Density Ni-based Metallic Glasses Formed by Spark Plasma Sintering", H.J. Neilson, G. Shiflet, A. Peterson, S. Poon and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 17, 2015.

807."The Fracture and Fatigue Crack Growth Behavior of Ti-48Al-2Nb-2Cr Next Generation Turbine Blade Material", M. Dahar, B.P. Bewlay, S.M. Seifi, and JJ Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 17, 2015.

808.**"Overview of CWRU and Manufacturing Efforts", J.J. Lewandowski, Nanyang Technological University SC3DP Center, Singapore, May 6, 2015.

809.**" Overview of CWRU and Case School of Engineering Efforts in Advanced Manufacturing and Additive Manufacturing", J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore, May 14, 2015.

810.**"Additive Manufacturing Research at Case Western Reserve University", J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore, May 21, 2015.

811.**"Flow and Fracture Studies on Metallic Glasses", J.J. Lewandowski, Dept. Materials Science and Engineering, Nanyang Technological University, Singapore, May 22, 2015.

812.**"Overview of CWRU Work on Metallic Glasses and Additive Manufacturing", J.J. Lewandowski, Singapore Institute of Manufacturing and Technology – SIMTech, Singapore, May 27, 2015.

813."Sensitization Effects on Fracture and Fatigue Behavior of Al-Mg Naval Alloys", M. Siefi, H. Jiang, B. Li, and J.J. Lewandowski, 3rd World Congress on ICME, Colorado Springs, CO, June 1, 2015.

814.**"The Impact of Additive Manufacturing on Physical Metallurgy, or Vice Versa", J.J. Lewandowski, Physical Metallurgy Gordon Conference, Biddeford, ME, July 23, 2015.

815.**"Pressure/Stress State Effects on Mechanical Behavior and Deformation Processing of Materials", J.J. Lewandowski, Los Alamos National Lab Institute for Materials Science Seminar Series, Los Alamos, NM, August 3, 2015.

816.**"Overview of CWRU Work on Metallic Glasses and Advanced/Additive Manufacturing", J.J. Lewandowski, Los Alamos National Lab Institute for Materials Science Seminar Series, Los Alamos, NM, August 5, 2015.

817."Fracture and Fatigue Crack Growth of Two High Entropy Alloys", M. Seifi, D. Li, Z. Yong, P.K. Liaw, and J.J. Lewandowski, Multinational Webinar**,** August 5, 2015.

818."Microstructural Characterization of Ti-6Al-4V Made by Electron Beam Melting", J. Beckman, M. Seifi, M. Dahar, O. Harrysson, N. Klingbeil, J Beuth, and J.J. Lewandowski, International SFF Symposium: An Additive Manufacturing Conference, Univ. of Texas at Austin, Austin, TX, August 10, 2015.

819.**"Effects of Thermal Exposures on Fracture and Fatigue in 5XXX Alloys Tested in Different Orientations (and Environments)", J.J. Lewandowski, ONR Program Review, University of Virginia, Charlottesville, VA, August 14, 2015.

820."Microstructure and Mechanical Properties of Ti-48Al-2Cr-2Nb Produced via Electron Beam Melting", M. Seifi, I. Ghamarian, P. Samimi, A.C. Ackelid, P.C. Collins, and J.J. Lewandowski, International Conference on Ti Alloys, San Diego, CA, August 17, 2015.

821."Process Mapping and Fracture and Fatigue Behavior of Ti-6Al-4V Made by Additive Manufacturing", M. Seifi, D. Christiansen, O. Harrysson, J. Beuth, and J.J. Lewandowski, International Conference on Ti Alloys, San Diego, CA, August 18, 2015.

822.**"Standards use in the Classroom and Research at CWRU", J.J. Lewandowski, Standards Workshop at CWRU, September 2, 2015.

823.**"Mechanical Behavior of Additively Manufactured Materials", J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 5, 2015.

824."High Density Ni-based Metallic Glasses Formed by Spark Plasma Sintering", H.J. Neilson, A.S. Peterson, A.M. Cheung, S.J. Poon, G.J. Shiflet, and J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 5, 2015.

825."A Review of Fracture and Fatigue of Stranded and Coiled Wires Used in Biomedical Applications", J. Gbur and J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 6, 2015.

826."Fracture and Fatigue Crack Growth Behavior of EBM Titanium Alloys", M. Seifi, M. Dahar, T. Horn, C. Oswald, O.A. Harrysson, U. Ackel, J. Beuth, and J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 7, 2015.

827."Microstructure and Mechanical Properties of ϒ-Titanium Aluminide Manufactured by ARCAM Electron Beam Melting", M. Seifi, P. Samimi, I. Ghamarian, U. Ackelid, P.C Collins, J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 7, 2015.

828."Fracture and Fatigue of Ti-6Al-4V Produced by Additive Manufacturing", M. Dahar, M. Seifi, and J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 7, 2015.

829."Microstructural Evolution of γ-Titanium Aluminide Manufactured by ARCAM Electron Beam Melting", P. Samimi, M. Seifi, I. Ghamarian, U. Ackelid, P.C. Collins, and J.J. Lewandowski, MS&T Meeting, Columbus, OH, October 7, 2015.

830.**"Processing and Properties of Nitinol", J.J. Lewandowski, Parker-Hannifin Tube and Fittings, Columbus, OH, October 23, 2015.

831."Rapid Qualification Methods for Powder Bed Direct Metal AM Processes", CWRU/CMU Powder Bed Team, America Makes Program Review, Youngstown, OH, November 17, 2015.

832."Fracture and Fatigue of HEA Materials", M. Seifi and J.J. Lewandowski, International Webinar with University Tennessee/Tohoku Univ./Beijing University Science and Technology/CWRU, November 25, 2015.

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833.**"Fracture and Fatigue of Particulate Metal Matrix Composites, NanoComposites and Laminates", J.J. Lewandowski, Materion, Elmore, OH, January 5, 2016.

834.**"Fracture and Fatigue of Bulk Metallic Glasses and Composites", J.J. Lewandowski, Materion, Elmore, OH, January 5, 2016.

835.**"Processing for Assured Properties in Al-Li Forgings", D. Schwam, J.J. Lewandowski, and H.J. Neilson, LIFT Kickoff Meeting, Detroit, MI, January 21, 2016.

836."High Density Ni-based Metallic Glasses formed by Melt Spinning and Spark Plasma Sintering", H.J. Neilson and J.J. Lewandowski, ASMI Cleveland Chapter Meeting, Cleveland, OH, January 25, 2016.

837."Test Environment, Sensitization Effects on Fracture/Fatigue Behavior of 5XXX Alloys", M. Seifi, K. Macke, H. Holroyd, J.J. Lewandowski, ASMI, Cleveland, OH, January 25, 2016.

838.“Fracture and Fatigue Crack Growth of Ti-6Al-4V Made by Electron Beam Melting”, M. Seifi, M. Dahar, and J.J. Lewandowski, ASMI Cleveland Chapter Meeting, Cleveland, OH, January 25, 2016.

839.“Orientation and Location Dependent Mechanical Properties for Metal AM”, M. Seifi and J.J. Lewandowski, ASTM F42 Meeting, Philadelphia, PA, January 26, 2016.

840.**“Challenges in using AM Parts in Industrial Applications”, J.J. Lewandowski, TMS Annual Meeting, Nashville, TN, February 15, 2016.

841.“High Density Ni-based Metallic Glasses formed by Spark Plasma Sintering”, H.J. Neilson, A. Peterson, S.J. Poon, G.J. Shiflet, and J.J. Lewandowski, TMS Annual Mtg, Nashville, TN, February 15, 2016.

842.“Fracture and Fatigue Crack Growth Behavior of As-cast Ti-48Al-2Nb-2Cr and Ti-43Al-4Nb-1Mo”, M. Dahar and J.J. Lewandowski, TMS Mtg, Nashville, TN, February 15, 2016.

843.“Evaluation of Dental Archwires Following Flex Bending Fatigue”, J. Gbur, K. Gupte, R. Siebenaler, and J.J. Lewandowski, TMS Annual Mtg, Nashville, TN, February 15, 2016.

844.“Effects of Sensitization, Environment and Loading Rate on the Stress Corrosion Cracking Behavior of Al-Mg Alloys”, S.M. Seifi, N.J.H. Holroyd, and J.J. Lewandowski, TMS Annual Mtg., Nashville, TN, February 16, 2016.

845.“Role of Sensitization on the Fatigue Crack Growth Behavior of Al-Mg Alloys Using ICME Approach”, S.M. Seifi and J.J. Lewandowski, TMS Mtg, Nashville, TN, February 16, 2016.

846.“Fracture, Fatigue and Microstructure Informatics of Ti-6Al-4V Produced by AM: ICME Approach”, S.M. Seifi and J.J. Lewandowski, TMS Annual Mtg, Nashville, TN, February 16, 2016.

847.“Microstructural and Mechanical Characterization of γ–TiAl Manufactured by EBeam Melting”, S.M. Seifi and J.J. Lewandowski, TMS Mtg, Nashville, TN, February 16, 2016.

848.**”Fracture Toughness and Fatigue Crack Growth Behavior of High Entropy Alloys”, S.M. Seifi, P.K. Liaw, Y. Zhang, and J.J. Lewandowski, TMS Annual Mtg, Nashville, TN, February 16, 2016.

849.“An Improved Method for Calculation of Elastic Constants of Metallic Glasses”, H.J. Neilson, J.W. Carter, and J.J. Lewandowski, TMS Mtg, Nashville, TN, February 16, 2016.

850.“Effect of Tube Processing Methods on Microstructure and Mechanical Properties of Nanostructured Ferritic Alloys”, E. Aydogan, O. Anderoglu, S.A. Maloy, S.C. Vogel, G. Odette, D.T. Hoelzer, J.J. Lewandowski, I.E. Anderson, and J.R. Rieken, TMS Annual Mtg, Nashville, TN, February 16, 2016.

852.“Advanced Manufacturing and Mechanical Reliability Center (AMMRC)”, J.J. Lewandowski and C.J. Tuma, E-Week Banquet, Cleveland, OH, February 25, 2016.

853.“High Density Ni-based Metallic Glasses formed by SPS”, H.J. Neilson, A. Peterson, S.J. Poon, G.J. Shiflet, and J.J. Lewandowski, E-Week Banquet, Cleveland, OH, February 25, 2016.

854.“Nitinol Commercialization Accelerator–Ohio Third Frontier”, J. Gbur, M. Young, D. Schwam, J.D. McGuffin-Cawley, S. Padula II, J.J. Lewandowski, E-Week Banquet, Cleveland, OH, February 25, 2016.

855.“Fracture and Fatigue of Ti-6Al-4V Produced by Additive Manufacturing”, S.M. Seifi, M. Dahar and J.J. Lewandowski, E-Week Banquet, Cleveland, OH, February 25, 2016.

856.“Fracture and Fatigue of Wires and Cables Used in the Biomedical Industry”, J. Gbur and J.J. Lewandowski, E-Week Banquet, Cleveland, OH, February 25, 2016.

857.**”Rapid Qualification Methods for Powder Bed Direct Metal AM Processes”, CWRU Powder Bed America Makes Team, America Makes Technical Review and Exchange TRX, University of Texas El Paso (UTEP), El Paso, TX, March 8, 2016.

858.“Rapid Qualification Methods for Powder Bed Direct Metal AM Processes”, J.J. Lewandowski and J. Beuth, America Makes Technical Review and Exchange TRX, University of Texas El Paso (UTEP), El Paso, TX, March 8-9, 2016.

859.**”A Review of Mechanical (Strength, Fatigue) Behaviours of Wires/Cables Used in Biomedical Applications: Opportunties for Collaboration”, J.J. Lewandowski and J.L. Gbur, FES Seminar Series – CWRU, Cleveland, OH, March 17, 2016.

860.**”A Review of Process-Structure-Property Observations in AM Metallic Systems”, J.J. Lewandowski, Air Force Research Laboratory, Dayton, OH, April 1, 2016.

861.“Advanced Manufacturing and Mechanical Reliability Center (AMMRC)”, C.J. Tuma and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 15, 2016.

862.“Overview of Materials Qualification Needs for Metal Additive Manufacturing”, M. Seifi and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 15, 2016.

863.“A Review of the Fracture and Fatigue of Wires and Cables Used in Biomedical Applications”, J. Gbur and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 15, 2016.

864.“Hot Deformation/Forging Behavior of Al-7075 and 3rd Generation Al-Li Alloy”, H.J. Neilson, D. Schwam, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 15, 2016.

865.“Fracture and Fatigue Crack Growth of As-cast Ti-48Al-2Nb-2Cr (4822) and Ti-43Al-4Nb-1Mo (TNM)”, M. Dahar, S. Tamirisakandala, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 15, 2016.

866.“ASTM WK49229 – Orientation and Location Dependence of Mechanical Properties in Metal Additive Manufacturing”, M. Seifi and J.J. Lewandowski, ASTM Webinar, Cleveland, OH, April 18, 2016.

867.**"AT-1 Alcoa/Case Western Reserve Forging Update", M. Dahar, J.J. Lewandowski, and S. Tamirisakandala, US Air Force Metals Affordability Initiative Program Review, ARFL, Dayton, OH, April 29, 2016.

868.**"Overview of Materials Qualification Needs for Metal Additive Manufacturing", M. Seifi and J.J. Lewandowski, ASTM Workshop on Mechanical Behavior of AM Components", San Antonio, TX, May 4, 2016.

869.**"Environmental Effects on Fracture and Fatigue of Marine Alloys", J.J. Lewandowski, Mini-Symposium on Marine and Offshore Risk Engineering and Advanced Materials CWRU, Cleveland, OH May 5, 2016.

870."Flex Bending Fatigue of Dental Archwires", J.L. Gbur, K.N. Gupte, and J.J. Lewandowski, MSNO Annual Conference, Cleveland, OH, May 18, 2016.

871.**"Material Characterization and Mechanical Properties of Metallic AM Systems", J.J. Lewandowski, 2nd PRO-AM Conference, Singapore, May 19, 2016.

872.**"Rate-Controlling Processes During Environment-sensitive Crack Propagation in Al", T.L. Burnett, N.J.H. Holroyd, M. Seifi, and J.J. Lewandowski, International Workshop on the Environmental Damage in Structural Materials Under Static Load/Cyclic Loads at Ambient Temperatures", Engineering Conferences, Cork, Ireland, June 1, 2016.

873.**"Metal Additive Manufacturing: A Review of Mechanical Properties", J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, SC3DP- Nanyang Technological University, Singapore, June 1, 2016.

874.**"Pre-exposure Embrittlement of Sensitized Al-Mg Alloy 5083-H116", N.J.H. Holroyd, T. Burnett, M. Seifi, and J.J. Lewandowski, International Workshop on the Environmental Damage in Structural Materials Under Static Load/Cyclic Loads at Ambient Temperatures", Engineering Conferences International, Cork, Ireland, June 2, 2016.

875.**"Metal AM: A Review of Mechanical Properties", J.J. Lewandowski, Institute for High Performance Computing, ASTAR, Fusionopolis, Singapore, June 3, 2016.

876.**"Multi-scale Modeling Needs for Metallic Glasses/Composites and Additive Manufacturing", J.J. Lewandowski, Institute for High Performance Computing, ASTAR, Fusionopolis, Singapore, June 3, 2016.

877.**"Effects of Changes in Test Temperature on Tension Behavior and Toughness of BMG Composites", J.L.W. Carter and J.J. Lewandowski, BMG XI, Washington University, St. Louis, MO, June 7, 2016.

878."Development of Cost-Effective Advanced Mechanically Alloyed Powder Consolidation Processes for Sub-micrometer Reinforced MMCs", M.A. Willard and J.J. Lewandowski, LIFT-Materion Kick-off Meeting, Elmore, OH, June 9, 2016.

879.**"Microstructure Heterogeneity and Post Processing Effects on Mechanical Properties of Ti-48Al-2Cr-2Nb Manufactured by Electron Beam Melting", J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, Nanyang Technological University, Singapore, June 10, 2016.

880.**"A Review of Mechanical (Strength, Fatigue) Behavior of Wires/Cables for Biomedical Applications", J.J. Lewandowski and J.L. Gbur, Heraeus, Singapore, June 1, 2016.

881.**"Processing of Nanostructured Ferritic Alloys for Advanced Reactor Core Materials", S.A. Maloy, E. Aydogan, O. Anderoglu, T. Saleh, G.R. Odette, D. Hoelzer, C. Lavender, T.S. Byun, M.B. Toloczko, and J.J. Lewandowski, American Nuclear Society Meeting, New Orleans, LA, June 15, 2016.

882."Assessing the Structural Integrity of Additive Manufactured Metal Parts with X-ray CT", H. Villarraga-Gomez, M. Seifi, Y. Uchiyama, A. Ramsey, and J.J. Lewandowski, 2016 Summer American Society for Precision Engineering, Raleigh, NC, June 29, 2016.

883.**"Fracture and Fatigue of Particulate Metal Matrix Composites, NanoComposites and Laminates", J.J. Lewandowski, Materion AMC, Farnborough, UK, July 22, 2016.

884."Flex Bending Fatigue of Dental Archwires", J.L. Gbur, K.N. Gupte, and J.J. Lewandowski, M&M Annual Meeting, Columbus, OH, July 24-28, 2016.

885.**"Microstructure Characterization and Mechanical Behavior of AM Metals", J.J. Lewandowski (Presented by G.T. Gray III), PRICM-9, Kyoto, Japan, August 4, 2016.

886."Single Scan Track of Selective Laser Melting Ti-6Al-4V Powder on Support Structure", H. Gong, B. Stucker, J. Beuth, and J.J. Lewandowski, 2016 Annual SFF Symposium, Austin, TX, August 9, 2016.

887."Overview of Materials Qualification for Metal Additive Manufacturing", M. Seifi and J.J. Lewandowski, Workshop on Opportunities for In-Situ Characterization During Advanced Manufacture, Argonne National Lab, Chicago, IL, August 29, 2016.

888."Fracture and Fatigue Crack Growth Behavior of Ti-6Al-4V Made by E-Beam Melting", M. Seifi, M. Dahar, and J.J. Lewandowski, Workshop on Opportunities for In-Situ Characterization During Advanced Manufacture, Argonne National Lab, Chicago, IL, August 29, 2016.

889.**"Needs/Opportunities for Integration of Process-Structure-Property Studies Using Advanced Techniques", J.J. Lewandowski, Workshop on Opportunities for In-Situ Characterization During Advanced Manufacture, Argonne National Lab, Chicago, IL, August 30, 2016.

890.**"Development of Cost-Effective Advanced Mechanical Alloying, Powder Consolidation Processes for Sub-Micron Reinforced Al MMC's", M.A. Willard and J.J. Lewandowski, Materion-LIFT Kickoff Meeting, Elmore, OH, August, 31, 2016.

891.**"Fatigue and Fracture Review of AM Metallic Materials: Need for Integrated Approach for Process/Structure(including defects)/Property/Performance Behavior", J.J. Lewandowski, Joint FAA-Air Force Workshop on Qualification/Certification of AM Parts, AFRL-Tec^Edge, Dayton, OH, September 1, 2016.

892."Fatigue and Fracture of Wire-Based Systems Used in Biomedical Applications", J.L. Gbur and J.J. Lewandowski, MSE Congress on Biomaterials Applications, Darmstat, Germany, September 29, 2016.

893.**"CWRU Focus-Processing for Assured Properties in Al-Li", H.J. Neilson, D. Schwam, and J.J. Lewandowski, LIFT Quarterly Review Webinar, Detroit, MI, September 30, 2016.

894.**"Microstructure-Property Relationships in Advanced Materials", J.J. Lewandowski, MSNO Fall Meeting, Materials Park, OH, October 5, 2016.

895.**"Fracture and Fatigue Review of AM Metallic Materials", J.J. Lewandowski, UCSB Workshop on Additive Manufacturing, UC Santa Barbara, October 19, 2016.

896."Microstructure Informatics Cloud Computing for Data Analytics of Titanium Additive Manufacturing" A. Salem, D. Satko, J. Shaffer, R. Kublik, M. Seifi, and J.J. Lewandowski, MS&T 2016, Salt Lake City, UT, October 24, 2016.

897."Defect Detection and Distribution Analysis for Metal Additive Manufacturing through Industrial High Resolution Micro-tomography" M. Seifi, D. Rankin, J. Robbins, and J.J. Lewandowski, MS&T 2016, Salt Lake City, UT, October 24, 2016.

898."Fatigue Crack Initiation and Growth Behavior of EBM Ti-6Al-4V before and after Hot Isostatic Pressing", M. Seifi, A. Yadollahi, N. Shamsaei, and J.J. Lewandowski, MS&T 2016, Salt Lake City, UT, October 25, 2016.

899."Effects of Beta Grain Orientation and Defects on Fracture and Fatigue of As-deposited and HIP EBM Powder Bed Fusion Ti-6Al-4V", M. Seifi, B. Poorganji, A. Salem, and J.J. Lewandowski, MS&T 2016, Salt Lake City, UT, October 26, 2016.

900."Comparison of Strain Measurement Techniques for Tension Testing of Fine NiTi Wires", J.L. Gbur, B. Palmer, J.J. Lewandowski, MS&T 2016, Salt Lake City, UT, October 25, 2016.

901."A Review of Fatigue and Fracture of Wires and Cables Used in Biomedical Applications", J.L. Gbur and J.J. Lewandowski, ASM Student Night at CWRU, Case Western Reserve University, Cleveland, OH, November 21, 2016.

902.**"Microstructure-Property Relationships in Advanced Materials", J.J. Lewandowski, St. Gobain Visit to CWRU, CWRU, Cleveland, OH, October 27, 2016.

903."Microstructural Heterogeneity and Post Processing Effects on Mechanical Properties of Ti-48Al-2Cr-2Nb Additively Manufactured by Electron Beam Melting", M. Seifi, A. Salem, D. Satko, S.L. Semiatin, J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 28, 2016.

904."Fracture and Fatigue Crack Growth Behavior of Wrought Gamma Titanium Aluminide Ti-43Al-4Nb-1Mo in Different Microstructure Conditions", M. Dahar, T. Podbesek, S. Tamirisakandala, and J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 28, 2016.

905."Fracture and Fatigue Resistant $Al_{0.3}$CoCrFeNi High Entropy Alloy", M. Seifi, Y. Shi, P.K. Liaw, M.Chen, and J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 29, 2016.

906.**"Fracture and Fatigue Resistance of High Entropy Alloys", J.J. Lewandowski, M. Seifi, Y. Shi, M. Chen, and P.K. Liaw, MRS Fall Meeting, Boston, MA, November 30, 2016.

907.**"Flow and Fracture Studies on Metallic Glasses", J.J. Lewandowski, MRS Fall Meeting, Boston, MA, December 1, 2016.

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908."The Effects of Inclusions on the Fatigue Performance of Superelastic Nitinol Fine Wires", J.L. Gbur, J. Peppler, and J.J. Lewandowski, TMS Mtg., San Diego, CA, February 27, 2017.

909.**"Processing and Properties of Nanostructured Metallic Systems", J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 27, 2017.

910."Fracture and Fatigue Crack Growth Behavior of Wrought Gamma Titanium Aluminide Ti-43Al-4Nb-1Mo in Different Microstructure Conditions", M. Dahar, S. Tamiskalandala, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 28, 2017.

911."Cloud-based Integrated Computational Microstructure-informed Response for Titanium Additive Manufacturing", A. Salem, D. Satko, M. Seifi, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 28, 2017.

912.**"Location- and Orientation-dependent Properties in AM Systems", J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 28, 2017.

913.**"A Highly Fracture and Fatigue Resistant $Al_{0.3}$CoCrFeNi High Entropy Alloy ", M. Seifi, Y. Shi, P.K. Liaw, M. Chen, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 28, 2017.

914."Fatigue Behavior of High Entropy Alloys ", M. Seifi and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, February 28, 2017.

915.**"Pressure Dependence in Mechanical Properties of Metallic Glasses Near the Glass Transition", Z. Aitken, M. Zadeh, J.J. Lewandowski, and Y.W. Zhang, TMS Annual Mtg., San Diego, CA, March 1, 2017.

916."Effect of Different Processing Routes on the Microstructure and Texture of 14YWT Alloy", S. Pal, E. Alam, G. Odette, S. Maloy, D. Hoelzar, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, March 1, 2017.

917."Fatigue Behavior of Ti-6Al-4V Fabricated via Electron Beam Melding (EBM) Process", A. Yadollahi, J. Pegues, M. Seifi, N. Shamsaei, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, March 1, 2017.

918."A Highly Fracture and Fatigue Resistant Optimized As-deposited EBM Ti-6Al-4V", M. Seifi, J. Boyer, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, March 1, 2017.

919."Sensitization Effects on Tensile Behavior in 5XXX Series Aluminum Alloys: Micro- and Mesoscale Observations", B. Palmer and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, March 1, 2017.

920."Effect of Homogenization on Microstructure and Mechanical Properties of EBM Ti-48Al-2Cr-2Nb", M. Seifi, A. Salem, D. Satko, S.L. Semiatin, and J.J. Lewandowski, TMS Annual Mtg., San Diego, CA, March 2, 2017.

921."Fatigue Behavior of High Entropy Alloys", P. Chen, B. Chen, M. Hemphill, Z. Tang, T. Yuan, G. Wang, C. Tsai, A. Chuang, C.D. Lundin, J. Yeh, M. Seifi, D. Li, J.J. Lewandowski, K.A. Dahmen, and P.K. Liaw, TMS Annual Mtg., San Diego, CA, March 2, 2017.

922."MAI ATI-1: ICME Enhanced Development of TiAl for Advanced Aerospace Components", S. Tamirisakandala, T. Podbesek, E. Crist, M. Dahar, J.J. Lewandowski, MAI Task 3 Program Review, CWRU, Cleveland, OH, March 22, 2017.

923."New Insights into Environment Assisted Cracking of Pre-Exposed and Sensitized 5xxx Series Aluminum", T. Burnett, H. Holroyd, J.J. Lewandowski, and M. Seifi, Corrosion 2017, New Orleans, LA, March 27, 2017.

924."Pre-Exposure Embrittlement of Aluminum and Magnesium Alloys", J. Holroyd, T. Burnett, J.J. Lewandowski, and M. Seifi, Corrosion 2017, New Orleans, LA, March 27, 2017.

925."Hot Deformation/Forging and Mechanical Behavior of 3rd Generation Al-Li Alloy", H. Neilson, D. Schwam, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 21, 2017.

926."Advanced Manufacturing and Mechanical Reliability Center (AMMRC)", C.J. Tuma and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 21, 2017.

927."Environmetally Enhanced Cracking in 5XXX Al-Mg Alloys", B. Palmer and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 21, 2017.

928."Fracture and Fatigue Crack Growth Behavior of Ti-43Al-4Nb-1Mo (TNM)" M. Dahar, S. Tamirisakandala, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 21, 2017.

929."Fracture Characteristics of Discontinuously Reinforced Aluminum Composites", C. Park, C. Meyer, E. Bindas, D. Hashiguchi, K. Chung, J. Lewandowski, and M. Willard, CWRU Research SHOWCASE, Cleveland, OH, April 21, 2017.

930.**"MAI Gate Review of ATI-1: ICME Enhanced Development of TiAl for Advanced Aerospace Components", J. Foltz, S. Tamarisakandala, J.J. Lewandowski, N. Sonnentag, F. Zhang, P. Collins, B. Smith, A. Lou, D. McDowell, T. Broderick, Y. Zhou, E. Martinez, D. Legzdina, A. Young, J. Stanley, Q. Shuck, MAI Gate Review, Dayton, OH, April 27, 2017.

931.**"Metal Additive Manufacturing: A Review of Mechanical Properties", J.J. Lewandowski, Department of Mechanical and Materials Engineering, University of Cincinnati, Cincinnati, OH, April 28, 2017.

932.**"Education Aspects for Development of Cost-Effective Powder Consolidation Processes for Sub-micron MMCs", J.J. Lewandowski, Education Executive Team Presentation, LIFT HQ, Detroit, MI, May 4, 2017.

933."Characterizing Inclusions in Superelastic NiTi Fine Wires", J.L. Gbur, J. Peppler, and J.J. Lewandowski, MSNO Annual Conference, John Carroll Univ., Cleveland, OH, May 24, 2017.

934.**"Thermal Exposure and Environment Effects on Tension, Fracture and Fatigue of 5XXX Alloys Tested in Different Orientations", J.J. Lewandowski, ONR Program Review, USC, Los Angeles, CA, May 24, 2017.

935.**"Metal Additive Manufacturing: A Review of Mechanical Properties", J.J. Lewandowski, Department of Mechanical Engineering, Auburn University, Auburn, AL, June 5, 2017.

936.“Metal Additive Manufacturing: A Review of Mechanical Properties”, J.J. Lewandowski, Department of Materials Science and Engineering, University of Alabama-Birmingham, Birmingham, AL, June 6, 2017.

937.“Metal Additive Manufacturing: A Review of Mechanical Properties”, J.J. Lewandowski, Department of Metallurgical Engineering, University of Alabama-Tuscaloosa, Tuscaloosa, AL, June 8, 2017.

938.**”Fracture and Fatigue of BMGs and High Entropy Alloys”, J.J. Lewandowski, Institute for High Performance Computing, ASTAR, Fusionopolis, Singapore, June 29, 2017.

939.**”Metal Additive Manufacturing: A Review of Techniques and Mechanical Properties”, J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, SC3DP-Nanyang Technological University, Singapore, July 5, 2017.

940.**”Location- and Orientation-Dependent Properties in EBM Ti-48Al-2Cr-2Nb and Laser-Processed IN-718”, J.J.Lewandowski, Dept. Mechanical and Aerospace Engineering, SC3DP-Nanyang Technological University, Singapore, July 13, 2017.

941.**”AM and Lightweight Alloys Research”, J.J. Lewandowski, ARL Delegation Visit to CWRU, CWRU, Cleveland, OH, July 31, 2017.

942.**”Metal Additive Manufacturing: A Review of Techniques and Mechanical Properties”, J.J. Lewandowski, 3rd Annual Data Science in Life Sciences and Engineering Collaboration & Symposium, CWRU, Cleveland, OH, August 3, 2017.

943.”CWRU Project Update”, H.J. Neilson, D. Schwam, and J.J. Lewandowski, Al-Li Program Review, LIFT HQ, Detroit, MI, August 7, 2017.

944.”Temperature/Time Dependence of Environmental Cracking of Al-5456 and Al-5083 and Novel Laser Remediation Treatments”, J.J. Lewandowski, ONR Program Kickoff, Arlington, VA, August 14, 2017.

945.“Characterizing Inclusions and the Effects on the Fatigue Behavior of Superelastic Nitinol Fine Wire”, J.L. Gbur, J. Peppler, and J.J. Lewandowski, 3rd International Symposium on Fatigue Design and Material Defects”, Politecnico di Milano, Lecco, Italy, September 22, 2017.

946.**”Scope and Importance for Academia and Research in Metallic Materials for Additive Manufacturing”, J.J. Lewandowski, Quintus Technologies Hot Isostatic Pressing Workshop at ORNL-MDF, Knoxville, TN, October 5, 2017.

947.**”Processing of Ferritic Alloys for Nuclear Applications”, S.A. Maloy, E. Aydogan, T. Lienert, B. Eftink, G.R. Odette, M.D. Ershadul Alam, S. Pal, D. Hoelzer, J. Lewandowski, R. Webster, and T.S. Byun, MS&T 2017, Pittsburgh, PA, October 9, 2017.

948.“Fracture Characteristics of Discontinuously Reinforced Aluminum Composites”, C. Park, E. Bindas, C. Meyer, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, MS&T 2017, Pittsburgh, PA, October 9, 2017.

949.“Mechanical Properties of Discontinuously Reinforced Aluminum Composites”, E. Bindas, C. Park, C. Meyer, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, MS&T 2017, Pittsburgh, PA, October 9, 2017.

950.“Comparison of Characterization Techniques for Inclusions in Fine, Superelastic NiTi Wire”, J.L. Gbur, J. Peppler, J.J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 10, 2017.

951.“Hot Deformation/Forging and Mechanical Behavior of 3rd Generation Al-Li Alloy”, H. Neilson, D. Schwam, and J.J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 11, 2017.

952.“Environmentally-Enhanced Cracking of 5XXX Al-Mg Alloys”, B. Palmer and J.J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 11, 2017.

953.**“Issues in Mechanical Behavior of Additively Manufactured Metallic Alloys”, J.J. Lewandowski and M. Seifi, MS&T 2017, Pittsburgh, PA, October 11, 2017.

954.“Size Effects on Fracture and Fatigue Behavior of Additively Manufactured Alloys”, M. Seifi, J. Dzugan, and J.J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 11, 2017.

955.“Material Influences on Fatigue and Fracture of Dental Arch Wires”, D.S. Scannapieco, K.N. Gupte, J.L. Gbur, and J.J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 11, 2017.

956.“Fracture and Fatigue Crack Growth Behavior of Ti-43Al-4Nb-1Mo (TNM) after Different Stages of Processing”, M. Dahar, S. Tamirisakandala, and J. Lewandowski, MS&T 2017, Pittsburgh, PA, October 11, 2017.

957.**”Metal Additive Manufacturing: A Review of Techniques and Mechanical Properties”, J.J. Lewandowski, Department of Materials Science and Engineering Seminar Series, Johns Hopkins University, Baltimore, MD, October 18, 2017.

958.“Review of Fatigue and Fracture of Wires in Biomedical Applications with Comparisons to Recent E2948 ILS Data”, J.L. Gbur and J.J. Lewandowski, ASTM International Committee on Advanced Fatigue, Atlanta, GA, November 14, 2017.

959.“Material Influences on Fatigue and Fracture of Dental Arch Wires”, D. Scannapieco, K. N. Gupte, J.L. Gbur, and J.J. Lewandowski, ASTM International Committee E08 on Fatigue and Fracture, Atlanta, GA, November 15, 2017.

960.“Characterizing Inclusions in Nitinol Fine Wires Using Correlative Microscopy”, J.L. Gbur, J.J. Lewandowski, and J. Peppler, ASTM Symposium Commemorating 100 Years of E04 Development of Metallographic Standards, Atlanta, GA, November 15, 2017.

961.“Material Influences on Fatigue and Fracture of Dental Arch Wires”, D. Scannapieco, K. N. Gupte, J.L. Gbur, and J.J. Lewandowski, ASTM International Committee E08 on Fatigue and Fracture, Atlanta, GA, November 16, 2017.

962.“Small Scale Fracture and Fatigue Testing for Additively Manufactured Components”, J. Dzugan, M. Seifi, and J.J. Lewandowski, ASTM Symposium of Fatigue and Fracture of Additive Manufactured Materials and Components, Atlanta, GA, November 16, 2017.

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963."Microstructure Evolution During Hot Deformation of Aluminum 2070", H.J. Neilson and J.J. Lewandowski, ASM Cleveland Chapter Meeting, Cleveland, OH, January 22, 2018.

964.**"Sensitization Effects on Environmentally-Assisted Cracking in 5XXX Al Alloys", J.J. Lewandowski, TMS Annual Mtg., Phoenix, AZ, March 12, 2018.

965."Fracture and Fatigue Behavior of Silver-cored Drawn Filled Tube Strands for Biomedical Applications", J.L. Gbur and J.J. Lewandowski, TMS Mtg., Phoenix, AZ, March 13, 2018.

966.**"Fracture and Fatigue of Particulate Composites, Nano-composites, and Toughening Mechanisms", J.J. Lewandowski, TMS Annual Mtg., Phoenix, AZ, March 13, 2018.

967."Effects of Reinforcement Size and Volume Fraction on Tensile Behavior of Al-SiC Composites", C. Park, J.J. Lewandowski, and M.A. Willard, TMS Annual Mtg., Phoenix, AZ, March 13, 2018.

968."Weibull Analysis of High Strength Ni- and Fe-based Bulk Metallic Glasses", H.J. Neilson, J.W. Carter, and J.J. Lewandowski, TMS Annual Mtg., Phoenix, AZ, March 13, 2018.

969."Characterization of the Microstructure and Grain Boundary Character of 14-YWT Nanostructured Ferritic Alloys Following Different Deformation Processing Paths", S. Pal, S.A. Maloy, J.J. Lewandowski, and G.R. Odette, TMS Annual Mtg., Phoenix, AZ, March 14, 2018.

970."Sensitization Effects on Tensile Behavior in 5XXX Series Aluminum Alloys", B. Palmer and J.J. Lewandowski, TMS Annual Mtg., Phoenix, AZ, March 15, 2018.

971."Hot Deformation and Microstructural Evolution of 2070", H.J. Neilson, D. Schwam, and J.J. Lewandowski, CTO Al-Li Project Annual Review, Ann Arbor, MI, March 21, 2018.

972."Densification and Flow Stress Analysis of Al-SiCp Metal Matrix Composites Through Direct Powder Forging", E.B. Bindas, J. Kim, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, CWRU Research SHOWCASE, Cleveland, OH, April 20, 2018.

973."Fatigue Behaviors of Al Matrix SiC Particulate Reinforced Composites", J. Xia, C. Park, E. Bindas, J.J. Lewandowski, and M.A. Willard, CWRU Research SHOWCASE, Cleveland, OH, April 20, 2018.

974."Environmentally-Enhanced Cracking of 5XXX Al-Mg Alloys", B. Palmer and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 20, 2018.

975."Acoustic Measurements of Elastic Modulus in Metal Matrix Composites", C. Park, E. Bindas, J. Xia, J.J. Lewandowski, and M.A. Willard, CWRU Research SHOWCASE, Cleveland, OH, April 20, 2018.

976."Advanced Manufacturing and Mechanical Reliability Center (AMMRC)", C.J. Tuma and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 20, 2018.

977.**"Orientation- and Location-Dependent Properties in Metallic AM Samples and Structures", J.J. Lewandowski, 3rd PRO-AM Conference, Singapore, May 16, 2018.

978.**"Location- and Orientation Dependent Properties in Metallic AM Materials and Structures", J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, SC3DP-Nanyang Technological University, Singapore, May 28, 2018.

979.**"Environmental Effects on Mechanical Reliability of Al-Mg 5XXX Alloys in Naval and Defense Applications" J.J. Lewandowski, Dept. Mechanical and Aerospace Engineering, SC3DP-Nanyang Technological University, Singapore, June 6, 2018.

980."Understanding Environmentally Assisted Cracking of High Strength Aluminium Using In-Situ X-ray CT", T. Burnett, N.J.H. Holroyd, and J.J. Lewandowski, The 4th International Congress on 3D Materials Science (3DMS 2018), Elsinore, Denmark, June 11, 2018.

981."Comparison of Consolidation Processes of Mechanically Alloyed Al-SiC Metal Matrix Composite Powders", K.H. Chung, D. Hashiguchi, C. Park, E. Bindas, J. Xia, M.A. Willard, and J.J. Lewandowski, POWDERMET 2018, San Antonio, TX, June 17-20, 2018.

982."AT-1 Arconic Task 4 Progress", M. Dahar, H. Sims, S. Tamirisakandala, and J.J. Lewandowski, AIPT Face-to-Face, Portland, OR, June 19, 2018.

983."Micromechanistic Model for TNM Fatigue Crack Growth Rate", M. Dahar, H. Sims, S. Tamirisakandala, and J.J. Lewandowski, AIPT Face-to-Face, Portland, OR, June 19, 2018.

984.**"Location- and Orientation-Dependent Properties in Metallic AM Samples and Structures", J.J. Lewandowski, The 4th International Conference on Metallic Materials and Processing, Xi'an, China, June 19, 2018.

985."AT-1 Arconic Task 4 Progress", M. Dahar, H. Sims, S. Tamirisakandala, and J.J. Lewandowski, Arconic, Niles, OH, July 3, 2018.

986."Micromechanistic Model for TNM Fatigue Crack Growth Rate", M. Dahar, H. Sims, S. Tamirisakandala, and J.J. Lewandowski, Arconic, Niles, OH, July 3, 2018.

987.**"Navigating Legacy Data for Fatigue/Fracture of Wires/Cables for Biomedical Uses", J.L. Gbur and J.J. Lewandowski, THERMEC, Paris, France, July 9-13, 2018.

988.**"New Insights into the Initiation of Environmentally Assisted Cracking of High Strength Aluminum Revealed Through 3D and 4D Imaging", T.L. Burnett, V. Gudhla, N.J.H. Holroyd, B. Palmer, M. Seifi, M. Storm, P.J. Withers, and J.J. Lewandowski, Aqueous Corrosion Gordon Conference, New London, NH, July 12, 2018.

989.**"Sensitization Temperature/Time Dependence of Environmental Cracking in 5XXX Alloys and Novel Laser Remediation Treatments", J.J. Lewandowski, ONR Program Review, University of Virginia, Charlottesville, VA, July 16, 2018.

990."Extraction of EAC Crack Growth Rates and Stress Intensity Factors from Slow Strain Rate Test Data for 5XXX and 7XXX Series Aluminum Alloys", N.J.H. Holroyd, T. Burnett, B. Palmer, and J.J. Lewandowski, ECF Conference on Stress-Assisted Corrosion Damage, Hernstein, Austria, July 17, 2018.

991.**"Fracture and Fatigue Issues in (Metal) Additive Manufacturing", J.J. Lewandowski, ASPE Tutorial, Lawrence Berkeley National Lab, Berkeley, CA, July 22, 2018.

992."Sensitization Temperature/Time Effects on Environmental Cracking in 5XXX Alloys and Novel Laser Remediation Treatments", J.J. Lewandowski, Webinar with University of Nebraska-Lincoln, CWRU, Cleveland, OH, August 10, 2018.

993.**"Process/Structure/Property Relationships in Metal Additively Manufactured Materials and Structures", J.J. Lewandowski, Department of Materials Science and Engineering, North Carolina State University, Raleigh, NC, August 31, 2018.

994.**"Fracture and Fatigue Issues in Additively Manufactured Materials and Structures", International Conference on Fatigue Damage of Structural Materials XI, Cape Code, MA, September 18, 2018.

995.**"Environmental Effects on EAC of 7XXX Series Aluminum Alloys", N.J.H. Holroyd, T. Burnett, B. Palmer, and J.J. Lewandowski, MSE, Germany, September 28, 2018.

996.**"Environmental Cracking in Al Ship Material", B. Palmer and J.J. Lewandowski, MS&T, Columbus, OH, October 15, 2018.

997."Fatigue Behavior of 2124/25%SiCp/3μm Al Composites", J. Xia, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, MS&T, Columbus, OH, October 17, 2018.

998."Densification and Flow Stress Analysis of Al-SiCp Metal Matrix Composites Processed by Direct Powder Forging", E.B. Bindas, J. Kim, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, MS&T, Columbus, OH, October 17, 2018.

999.**"Incidence and Characterization of Corrosion in Stainless Steel Percutaneous Lead Systems Located Exterior to the Body", J.L. Gbur, D. Tyler, and J.J. Lewandowski, MS&T, Columbus, OH, October 17, 2018.

1000."Mechanical Anisotropy in Extruded MMCs", C. Park, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, MS&T, Columbus, OH, October 17, 2018.

1001.**"Process-Structure-Property Study on CP-Ti Produced via High Deposition AM Laser-Hot Wire (LHW)", J.J. Lewandowski, ONR Additive Manufacturing Program Review, Tysons Corner, VA, November 7, 2018.

1002.**"Sub-scale Mechanical Testing of Samples Printed and/or Excised from Parts", J.J. Lewandowski, J. Dzugan, and M. Seifi, ASTM Symposium on Structural Integrity of Additive Manufactured Parts", Washington, D.C., November 8, 2018.

1003.**"Pressure Effects on Flow and Fracture of BMGs", J.J. Lewandowski, MRS Fall Meeting, Boston, MA, November 27, 2018.

1004."Fracture Toughness of Cast and Extruded Al6061/15%Al_2O_3p Metal Matrix Composites", A.K. Hellier, A.G. Crosky, H.A. Hassan, and J.J. Lewandowski, CAMS 2018-Advancing Materials and Manufacturing, Univ. Wollongong, NSW, Australia, November 28, 2018.

1005.**"Investigating the Mechanical Behavior of 5XXX Aluminum Alloy Plates from the HMCS Iroquois", ONR Structural Materials Program Review, Tysons Corner, VA, December 5, 2018.

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1006."Fatigue Behavior of SupremEX 225 XE-T4 Aluminum MMCs", J Xia, M.A. Willard, and J.J. Lewandowski, Materion Aerospace Composites, Farnborough, U.K., February 7, 2019.

1007."Fatigue and Fracture Behavior of Gamma Titanium Aluminide Ti-43.5Al-4Nb-1Mo-0.1B (TNM), H. Sims, M. Dahar, S. Tamirisakandala, and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 12, 2019.

1008.**"Guiding and Deflecting Cracks in Bulk Metallic Glasses to Increase Damage Tolerance", J. Yi, W.H. Wang, and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 12, 2019.

1009.**"Visco-Plastic Self Consistent (VPSC) Modeling of Deformation Processing of NFA-1 14YWT Thin-Walled Tubing", S. Pal, I. Beyerlein, E. Alam, J. Lewandowski, S. Maloy, and R. Odette, TMS Annual Meeting, San Antonio, TX, March 12, 2019.

1010."Environmentally Assisted Cracking in Field-Retrieved 5XXX Alloys", B. Palmer and J.J. Lewandowski, TMS Annual Meeting, San Antonio, TX, March 14, 2019.

1011."Environmentally Assisted Crack Development in Field-Retrieved 5XXX Al-Alloys", B. Palmer and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1012."Fatigue and Fracture Behavior of Gamma Titanium Aluminide Ti-43.5Al-4Nb-1Mo-0.1B (TNM), H. Sims, M. Dahar, S. Tamirisakandala, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1013."A Review of Defect Formation and Fatigue Behavior of SLM-Processed AlSi10Mg", A. Ngo and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1014."Characterization of Corrosion in Stainless Steel Percutaneuous Leads Located Exterior to the Body Using Advanced Imaging Techniques", J.L. Gbur, D. Tyler, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1015."Tension and Fatigue Behaviors of SupremEX 225XE Composites", J. Xia, D. Hasiguchi, KC. Chung, J.J. Lewandowski, and M.A. Willard, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1016."Mechanical Characterization of Nitinol DFT (Drawn Filled Tube) 30% Pt Wire", N.K. Tomczak, J.L. Gbur, and J.J. Lewandowski, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1017."Bending Fatigue Behaviors of 6061 Al-SiCp Composites", J. Kim, J. Xia, J.J. Lewandowski, M.A. Willard, D. Hashiguchi, and K. Chung, CWRU Research SHOWCASE, Cleveland, OH, April 19, 2019.

1018.**"Workshop Summary Report on Metamorphic Manufacturing (i.e. Robotic Blacksmithing): The 3rd Wave of Digital Manufacturing?", J.J. Lewandowski, IoT Thought Leadership: IoT in Metamorphic Manufacturing and Supply Chain, The MidTown Tech Hive, Cleveland, OH, May 9, 2019

1019.“Small Scale Fatigue and Fracture Testing of AM Components”, M. Koukolikova, J. Dzugan, M. Seifi, R. Prochazka, and J.J. Lewandowski, BAM-NIST Workshop on Fatigue of Additive Manufactured Metallic Components, NIST, Gaithersburg, MD, May 16, 2019.

1020.“Integrated Computational Materials Engineering of Gamma Titanium Aluminides for Aerospace Applications”, S. Tamirisakandala, M. Dahar, and J.J. Lewandowski, Titanium 2019 – 14th World Conference on Titanium, Paris, France, June 13, 2019.

1021.**”Fracture and Fatigue Issues for (Metal) Additive Manufacturing”, J.J. Lewandowski, ICMAT 2019, Singapore, June 27, 2019.

1022.**“Investigating Rapid Solidification Phenomena in Additive Manufacturing of High-Entropy Alloys Using Molecular Dynamics Simulations Empowered by Machine Learning”, M. Jafary-Zadeh, K.H. Koo, R.P.S. Tan, M. Seifi, J.J. Lewandowski, and A. Shapeev, ICMAT 2019, Singapore, June 28, 2019.

1023.“Multiscale Correlative Characterization of Environmentally Induced Crack Initiation, Propagation, and Failure in a High-Strength Aluminum Alloy”, C.C. Gudla, T. Burnett, N.J.H. Holroyd, B. Palmer, and J.J. Lewandowski, Developments in X-Ray Tomography-SPIE Optical Engineering and Applications, San Diego, CA, August 13-15, 2019.

1024.“Reliability of Metallic Parts”, J.J. Lewandowski, NSF-MDS RELY, Cleveland, OH, September 11, 2019.

1025.“Mechanical Reliability of Metallic AM Parts”, J.J. Lewandowski, A. Ngo, H. Sims, D. Scannapieco, and J. Gbur, NSF-MDS RELY, Cleveland, OH, September 11, 2019.

1026.“Advanced Manufacturing and Mechanical Reliability Center (AMMRC)”, J.J. Lewandowski and C. Tuma, NSF-MDS RELY, Cleveland, OH, September 11, 2019.

1027.“Fatigue and Fracture of Wires and Cables Used in Biomedical Applications”, J.L. Gbur and J.J. Lewandowski, NSF-MDS RELY, Cleveland, OH, September 11, 2019.

1028.**"Metamorphic Manufacturing Activities and Evolving Opportunities at Case Western Reserve University", J.J. Lewandowski, R.D. Quinn, K.A. Loparo, and R.X. Gao, MS&T 2019, Portland, OR, September 30, 2019.

1029.**“Fatigue and Fracture of Drawn Filled Tubes used in Neuromodulation and Cardiovascular Applications”, J.L Gbur and J.J. Lewandowski, MS&T 2019, Portland, OR, October 1, 2019.

1030.**“Characterizing Inclusion Populations in Superelastic NiTi-Correlation to Mechanical Behavior”, J.L. Gbur, J.J. Lewandowski, MS&T 2019, Portland, OR, October 1, 2019.

1031.“Systematic Generation of Process Parameter Induced Lack of Fusion Defects”, B.P. Conner, V. Jayasekera, J. McKnight, J. lecher, G. Jones, K. Meinert, A. Ngo, and J.J Lewandowski, MS&T 2019, Portland, OR, October 2, 2019.

1032."Comparison of Environmentally Assisted Cracking in High Zinc Content 7XXX Al Alloys Imaged by Time-lapse Synchrotron Computed Tomography (CT)", T.L. Burnett, V.C. Gudla, N.J.H. Holroyd, A. Garner, H. Song, M. Storm, B.C. Palmer, J.J. Lewandowski, P.J. Withers, and P.B. Pragnell, EUROCORR 2019, Seville. SPAIN, September 13, 2019.

1033."Multiscale Correlative Characterization of Environmentally Assisted Crack Initiation, Propagation and Failure in a High Strength Aluminum Alloy", V.C. Gudla, B.C. Palmer, M. Storm, J.J. Lewandowski, P.J. Withers, N.J.H. Holroyd, and T.L. Burnett, EUROCORR 2019, Seville. SPAIN, September 13, 2019.

1034.**"Advanced Manufacturing and Mechanical Reliability Center @ CWRU: Activities Focused on Defects", J.J. Lewandowski, CHESS Workshop on Methods for Characterizing Defects in Advanced Manufacturing Processes – Cornell University, Ithaca, NY, October 15, 2019.

1035.**"From Initiation to Failure: Environmentally Assisted Cracking of AA5083-H131", T.L. Burnett, V.C. Gudla, J.J.H. Holroyd, B.C. Palmer, and J.J. Lewandowski, LightMAT 2019, Manchester, UK, November 5, 2019.

1036."Fracture and Fatigue Resistance of HEAs", J.J. Lewandowski, M. Seifi, and P.K. Liaw, World Congress on High Entropy Alloys (HEA 2019), Seattle, WA, November 18, 2019.

1037. ** 'Fracture and Fatigue of Additively Manufactured Materials', J.J. Lewandowski, Tokyo Institute of Technology, Tokyo, Japan, December 9, 2019.

1038. **'Pressure/Stress State Effects on Fundamental Mechanisms of Plastic Deformation in Structural Matls', J.J. Lewandowski, MRM 2019, Yokohama, Japan, December 11, 2019.

1039.'Fracture/Fatigue of AM Materials', J.J. Lewandowski, Nikon, Ofuna, Japan, December 13, 2019.

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1040. 'Process-Structure-Property Study on CP-Ti (Grade 2) Produced via High Deposition AM Laser-Hot Wire', H. Sims and J.J. Lewandowski, Lincoln Electric, Cleveland, OH, January 17, 2020.

1041. **'Mechanical Behavior of Induced Lack of Fusion Flaws in AlSi10Mg', B. Conner, J. Lewandowski, A. Ngo, V. De Silva Jayasekera, G. Jones, K. Meinert, TMS Annual Meeting, San Diego, CA, February 24, 2020.

1042. 'Mechanical Testing and Tomography of Crack Development in 5XXX Aluminum Service Material', B. Palmer and J.J. Lewandowski, TMS Meeting, San Diego, CA, February 24, 2020.

1043. **'Fracture/Fatigue Study on CP-Ti (Grade 2) Produced via High Deposition AM Laser-Hot Wire', H. Sims, J.J. Lewandowski, TMS Mtg, San Diego, CA, February 26, 2020.

1044. "CWRU Efforts for NASA ULI", J.J. Lewandowski, B. Palmer, A, Ngo and C.J. Tuma, NASA ULI Program Review, CMU-Pittsburgh, PA (Zoom Meeting), June 9, 2020.

1045. **'Sensitization Temperature/Time Effects on Environmental Cracking in 5XXX Alloys and Novel Laser Remediation Treatments', J.J. Lewandowski, ONR Program Review (Virtual), August 19, 2020.

1046. ""In-Situ Alloying of GRCop-42 via Additive Manufacturing: Precipitate Analysis", D.S. Scannapieco, R.B. Rogers, D.L. Ellis, J.L. Smith and J.J. Lewandowski, JANNAF Additive Manufacturing for Propulsion Applications Technical Interchange Meeting, Virtual Conference, September 16, 2020.

1047. "CWRU Efforts for NASA ULI", J.J. Lewandowski, B. Palmer, A, Ngo and C.J. Tuma, NASA ULI Program Review, CMU-Pittsburgh, PA (Zoom Meeting), October 6, 2020.

1048. **"Mechanical Behavior of High-Entropy Alloys (FCC-3d TM and BCC-Refractory Systems)", J.J. Lewandowski, HEA Roundtable Webinar, TMS Virtual Webinar Series, November 17, 2020.

1049. **"Microstructural Heterogeneity and Post Processing Effects on Mechanical Properties of Ti-48Al-2Cr-2Nb Additively Manufactured by EBM", J.J. Lewandowski, A. Salem, D. Satko, M. Seifi, and S.L. Semiatin, MRS Fall Meeting (Virtual), December 2, 2020.

1050. "CWRU Efforts for NASA ULI", J.J. Lewandowski, A. Ngo, D. Scannapieco, and C.J. Tuma, NASA ULI Program Review, CMU-Pittsburgh, PA (Zoom Meeting), December 11, 2020.

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1051. **"CWRU Update to NASA-LaRC on NASA ULI", J.J. Lewandowski, A. Ngo, D. Scannapieco, C. Sharpe, and C.J. Tuma, NASA ULI Program Update, CWRU (Zoom Meeting), January 28, 2021.

1052. **"Process-Structure-Property Study on CP-Ti (Grade 2) Produced via High Deposition AM Laser Hot Wire", H. Sims and J.J. Lewandowski, ONR Program Review (Zoom Meeting), February 22, 2021.

1053. **"CWRU Update on NASA ULI: Fracture/Fatigue Testing/Analyses wrt Processing Conditions", J.J. Lewandowski, A. Ngo, C. Sharpe, D. Scannapieco, and C. Tuma, NASA ULI Program Review (Zoom Meeting), March 4, 2021.

1054. **"Effects of Process-Induced Defects on S-N Fatigue of LPBF Ti-6Al-4V", J.J. Lewandowski, A. Ngo, C. Sharpe, D. Scannapieco, and C. Tuma, TMS Annual Meeting (Virtual), March 15, 2021.

1055. "Mechanical Characterization of Nitinol Wires for Use in Orthodontics", A. Oluwatumininu, J.L. Gbur, and J.J. Lewandowski, CWRU SOURCE Workshop, CWRU, Cleveland, OH, August 8, 2021.

1056. "Mechanical Characterization of Implantable Nitinol Drawn Filled Tube 10% and 30% Platinum Wires", J. Garcia, J.L. Gbur, and J.J. Lewandowski, CWRU SOURCE Workshop, CWRU, Cleveland, OH, August 8, 2021.

1057. "Fatigue Performance of 35N LT and Nitinol in a Simulated Biomedical Environments" H. Wagreich, J.L. Gbur, and J.J. Lewandowski, CWRU SOURCE Workshop, CWRU, Cleveland, OH, August 8, 2021.

1058. **"Process-Structure-Corrosion/SCC Property Study of High Deposition Rate AM 316L Stainless Steel", J.J. Lewandowski, Virtual Program Review with ONR, August 12, 2021.

1059. **"ARPA-E ULTIMATE Refractory Alloy Innovations for Superior Efficiency (RAISE)", J.J. Lewandowski, Virtual Program Review with ARPA-E, August 13, 2021.

1060. **"Development of an Ecosystem for Qualification of Additive Manufacturing Processes and Materials in Aviation", A.G. Rollett, S. Narra, J.J. Lewandowski, and N. Pestien, NASA ULI Community Talk, Virtual, August 18, 2021.

1061. **"Fatigue Behavior and Fracture Analysis of LPBF Ti-6Al-4V", J.J. Lewandowski, A Ngo, D Scannapieco, C. Sharpe, and F. Medina, NASA ULI Annual Review, Virtual, September 30, 2021.

1062. **"Defect (Pore) Structures, Extreme Value Statistics, Relationship to Observations of Critical Flaws and Fracture Surface Defects", S. Narra, E. Diewald, D. Scannapieco, and J.J. Lewandowski, NASA ULI Annual Review, Virtual, September 30, 2021.

1063. "Effects of Process Parameters, Post-Processing, and Defects on Tension and Fatigue Properties of LPBF AlSi10Mg", A. Ngo, C. Sharpe, V. Jayasekera, B. Conner, H. Martin, C. Tuma, and J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1064. "Effects of Process Parameters on Fatigue Behavior and Defect Characteristics in LPBF Ti-6Al-4V", A. Ngo, D. Scannapieco, C. Sharpe, H. Taylor, R. Wicker, F. Medina, E. Arrieta, A. Gamon, S. Arriola, E. Trejo, J. Pauza, A. Rollett, and J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1065. "Effects of Process Parameters, Defects, and HIP Processing on S-N Fatigue of LPBF AlSi10Mg", C. Sharpe, A. Ngo, M. Shinohara, V. Jayasekera, B. Conner, H. Martin, C. Tuma, and J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1066. "Fracture Surface Defect Quantification for LPBF Additively Manufactured Ti-6Al-4V", D. Scannapieco, A. Ngo, C. Sharpe, H. Taylor, R. Wicker, J. Pauza, A. Rollett, and J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1067. "Effects of Laser Remediation Treatments on Environmentally-Assisted Cracking of 5XXX Ship Plates", Y. Liu, B. Palmer, and J.J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1068. "Effects of Laser Remediation Treatments on Global vs Local Environmentally-Assisted Cracking of 5XXX Ship Plates", Y. Liu and J.J. Lewandowski, MS&T 2021, Columbus, OH, October 18, 2021.

1069. **"Effects of Process Parameters, Post-Processing, and Defects on Tension and Fatigue Properties of LPBF AlSi10Mg", A. Ngo, C. Sharpe, V. Jayasekera, B. Conner, H. Martin, C. Tuma, and J. Lewandowski, Ohio State University, Columbus, OH, October 19, 2021.

1070. **"Effects of Process Parameters on Fracture and Fatigue of High Deposition Rate Laser Hot Wire Processed CP-Ti Grade 2", H. Sims and J.J. Lewandowski, Ohio State University Seminar, Columbus, OH, October 19, 2021.

1071. "Evaluation of In-Situ Alloyed, Additively Manufactured GRCop-42", D. Scannapieco, D.L. Ellis, and J. Lewandowski, MS&T 2021, Columbus, OH, October 19, 2021.

1072. “Effects of Process Parameters on Fracture and Fatigue of High Deposition Rate Laser Hot Wire Processed CP-Ti Grade 2”, H. Sims and J.J. Lewandowski, MS&T, Columbus, OH, October 20, 2021.

1073. **“Process-Structure-Corrosion/SCC Property Study of High Deposition Rate AM 316L Stainless Steel, J.J. Lewandowski, ONR Program Review (Virtual), November 11, 2021.

1074. **”Environmental Effects on Mechanical Reliability of Al-Mg 5XXX Alloys Used in Naval and Defense Applications”, J.J. Lewandowski, CWRU Materials Science Seminar Series, Case Western Reserve University, Cleveland, OH, November 22, 2021.

1075. **”ARPA-E ULTIMATE Refractory Alloy Innovations for Superior Efficiency (RAISE)”, J.J. Lewandowski, Virtual Program Review with ARPA-E, November 22, 2021.

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1076. **”Mechanical Properties of AM Deposited Metallic Components”, J. Dzugan, D. Melzer, S. Rzepa, L. Kraus, M. Seifi, N. Shamsaei, and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 1, 2022.

1077. “Information-rich Fatigue Fracture Surface to Evaluate Additive Manufacturing Parameters” D. Scannapieco, A. Ngo, C. Sharpe, H. Taylor, J. Pauza, E. Garibay, E. Diewald, C. Gobert, R.Wicker, A. Rollett, J. Beuth, and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 2, 2022.

1078. “Effects of Process Parameters on Fatigue Behavior and Defect Characteristics in LPBF Ti-6Al-4V: A. Ngo, D. Scannapieco, H. Taylor, R. Wicker, J. Pauza, A. Rollett, J. Beuth, and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 2, 2022.

1079. “Comparison of Statistical Predictors of Additive Manufacturing Process-induced Defects Using Fractography and Metallography”, D. Scannapieco, A. Ngo, C. Sharpe, M. Shahabi, S. Narra, J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 2, 2022.

1080. “A Method to Predict Critical Pore/Defect Size in Laser Powder Bed Fusion Additively Manufactured Ti-6Al-4V Parts”, M. Shahabi, A. Ngo, D. Scannapieco, J.J. Lewandowski, and S.P. Narra, TMS Annual Meeting, Anaheim, CA, March 2, 2022.

1081. “Process-structure-property Study on CP-Ti (Grade 2) Produced via High Deposition AM Laser-hot Wire” H. Sims and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 2, 2022.

1082. “Effects of Process Parameters, Post-processing, and Defects on Tension and Fatigue Properties of LPBF AlSi10Mg”, A. Ngo, C. Sharpe, V. Jayasekera, B. Conner, H. Martin, C. Tuma, and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 3, 2022.

1083. “Effects of Process Parameters, Defects, and HIP Processing on S-N Fatigue of LPBF AlSi10Mg” C. Sharpe, A. Ngo, C. Tuma, M. Shinohara, H. Martin, and J.J. Lewandowski, TMS Annual Meeting, Anaheim, CA, March 3, 2022.

1084. **”Fatigue Issues in (Metal) AM”, J.J. Lewandowski, The Aerospace Corporation, El Segundo, CA, March 3, 2022.

1085. “Effect of Test Orientation on Environmentally-assisted Cracking of 5XXX Series Aluminum Alloys”, Y. Liu and J.J. Lewandowski, TMS Annual Meeting (Virtual), March 14, 2022.

Invited = 469 Contributed = 616 Total = 1085

JOHN J. LEWANDOWSKI–Advanced Manufacturing and Mechanical Reliability Center
Established 1987 – Houses equipment valued in excess of $5.0M; Employs One Full Time Staff and One Part Time Staff; Internal/External Users may access facility at Federally Audited Rates. **Have Generated/Expended > $7M from 1987-2020 in the AMMRC.**

JOHN J LEWANDOWSKI Grants Since 1986 (160 Funded Grants: Expended > $40M)
Details available on request.

JOHN J. LEWANDOWSKI – ADVISEES, POST-DOCTORAL, VISITING SCHOLARS

M.S. Students (83):
1. H. Kanai (1987), President – Kanai Juyo Kogyo Co, Ltd., Japan
2. M. Doty (1988), Latrobe Steel, Latrobe, PA
3. T. Spear (1989), STERIS Corporation, Cleveland, OH
4. D. Henderson (1989), TIMKEN, Canton, OH
5. J. D. Rigney (1990), GE Aviation, Evendale, OH
6. D. Miller (1991), US Steel, Munster, IN
7. S. Maloy (1991), Los Alamos National Lab, Los Alamos, NM
8. M. Assel (1991), Carlisle Brake and Friction, Solon, OH
9. J. Wolfe (1991), TimkenSteel, Canton, OH
10. J. Frank (1992), Saint-Gobain Crystals, Canton, OH
11. L. Ellis (1992),
12. F. Ritzert (1992), NASA Glenn Research Center, Cleveland, OH
13. T. Osman (1993), MRS-Executive Director, Warrendale, PA
14. A.L. Grow (1994), TimkenSteel, Canton, OH
15. J. Walkup (1994), Proctor & Gamble, Cincinnati, OH
16. Y. Esmaelipour (1995), New York, NY
17. A. Vaidya (1995), Mahindra & Mahindra Ltd., Mumbai, India
18. P. Lowhaphandu (1995), Thainox Steel, Bangkok, Thailand
19. J. Short (1995), Johnson & Johnson, Jacksonville, FLA
20. A. Samant (1996), Materion, Elmore/Cleveland, OH
21. C. Robinson (1996), NASA Glenn Research Center, Cleveland, OH
22. L. Ludrosky (1998), Motorola, Phoenix, AZ
23. J. McCrindle (1998),
24. W. Zinsser (1998), Robert Bosch LLC, Farmington Hills, MI
25. P. Dickerson (1999), Los Alamos National Lab, Los Alamos, NM
26. J. Oviedo (1999), Supervisor, Enterprise Products, Houston, TX
27. G. Ramachandran (1999), Lockheed Martin Space Systems, San Jose, CA
28. K. Subramanian (2000), Savannah River National Lab, Aiken, SC
29. J. Carrigan (2000), LUXFER USA, Riverside, CA
30. N. Prabhu (2001), Cessna Aircraft, Wichita, KS
31. D. Padhi (2001), Applied Materials, Santa Clara, CA
32. N. Atwood (2001),
33. J. Larose (2001), Pratt & Whitney, Montreal, Canada
34. S. Johnson (2002), LUXFER USA, Riverside, CA
35. F. Jokhio (2003), Swagelok, Cleveland, OH
36. P. Wesseling (2003), Rolls Royce, Indianapolis, IN
37. J. Caris (2003), Mesocoat, Euclid, OH
38. D. Hotter (2003), Firth Rixson, Norwich, CT
39. K. Mayer (2004), ALCOA, Cleveland, OH
40. A. Awadallah (2004), Ft. Lauderdale, FLA

41. A. Thurston (2004), Wyman-Gordon, Boston, MA
42. T. Jacobs (2004), Assistant Professor, University Pittsburgh, Pittsburgh, PA
43. D. Bush (2005), Arconic, Cleveland, OH
44. S. Solv'yev (2006), Pratt & Whitney, East Hartford, CT
45. K. Lee (2006), SSA, Cleveland, OH
46. A. Vormelker (2006), BWX Technologies, Euclid, OH
47. X. Tang (2006), Assistant Professor, Univ. Florida, Gainesville, FLA
48. G. Sunny (2007-coadvised), US Army Corp of Engineers, Buffalo, NY
49. P. Dahlstrom (2007), Foseco, Solon, OH
50. J. McNatt (2009), NASA Glenn Research Center, Cleveland, OH
51. D. Herman (2009), Ford Motor, Detroit, MI
52. L. Diebler (2009). Sandia National Laboratory, Albuquerque, NM
53. J. Brosi (2010), Bettis Atomic Power Laboratory, West Mifflin, PA
54. S. Dike (2010-coadvised), Phillips Medical, Albany, NY
55. S. Schriener (2010), Thyssenkrupp, Cleveland, OH
56. B. Benini (2010), SinterFire, Reading, PAa
57. R. Park (2010), CWRU Dental School, Cleveland, OH
58. K. Kulpinski (2012), Eaton, Cleveland, OH
59. S.M. Seifi (2013), ASTM, Washington, DC
60. H. Neilson (2014), Exponent, Palo Altom CA
61. M. Dahar (2014), Arconic, Niles, OH
62. J. Booth-Clinton (2014-coadvised), Raytheon, Boston, MA
63. J.O. Bobanga (2014), NASA Glenn Research Center, Cleveland, OH
64. K. Macke (2015), St. Gobain, Cleveland, OH
65. T. Dux (2015), Arconic-Howmet, Cleveland, OH
66. B. Andrasik (2015), SSP, Cleveland, OH
67. D. Young (2018), TimkenSteel, Canton, OH
68. R. Rebman (in progress), Pentair Water Quality Systems, Willoughby, OH
69. R. Barrie (in progress), NASA Glenn Research Center, Cleveland, OH
70. B. Palmer (2017), Pratt & Whitney, East Hartford, CT
71. E. Bindas (2018-coadvised), Orbital ATK, Salt Lake City, UT
72. C. Park (2018-coadvised), Genentech, Berkeley, CA
73. Z. Braslawsce (2018), US Air Force-coadvised), Dayton, OH
74. J. Xia (2019-coadvised), Bosch, Wuxi, China
75. S. Heyse (2019), TimkenSteel, Canton, OH
76. A. Ngo (2020), PhD student, CWRU, Cleveland, OH
77. C. Sharpe (2021), BS/MS, CWRU, Cleveland, OH
78. R. Chowdhury (in progress), MS student, CWRU, Cleveland, OH
79. J. Kim (in progress), BS/MS student, CWRU, Cleveland, OH
80. K. Aguirre (in progress), MS student, CWRU, Cleveland, OH
81. J. Smith (in progress), BS/MS, CWRU, Cleveland, OH
82. T. Ciardi (in progress – co-advised), MS Student, CWRU Cleveland, OH
83. S. Crowell (in progress), BS/MS student, CWRU, Cleveland, OH

Ph.D. Students (33):

1. Y.S. Kim (1989), RIST Fellow, Korea
2. D.S. Liu (1990), Retired-Chung-Chen University, Taiwan
3. C. Liu (1992), Thermo-disc, Mansfield, OH
4. R.W. Margevicius (1992), Los Alamos National Lab, Los Alamos, NM
5. G.A. Rozak (1993), HC Starck/Bayer, Cleveland, OH
6. J. Kajuch (1993), Retired-Liquidmetal, Lake Forest, CA

7. J.D. Rigney (1993), GE Aviation, Evendale, OH
8. S.A. Maloy (1993-coadvised), Los Alamos National Lab. Los Alamos, NM
9. T.M. Osman (1995), MRS-Executive Director, Warrendale, PA
10. E. Hilinski (1996), Tempel Steel, Chicago, IL
11. L. Ellis (1998), Morgantown, WV
12. C. Bowman (1999), NASA Glenn Research Center, Cleveland, OH
13. P. Lowhaphandu (1999), Thainox Steel, Bankok, Thailand
14. H. Hassan (2003), Ain Shams University, Cairo, Egypt
15. F. Yuan (2007), Institute of Mechanics, Beijing, China
16. J.B. Caris (2007), Mesocoat, Euclid, OH
17. A.S. Nouri (2009), MEDEVI, LLC, San Francisco, CA
18. C.K. Huang (2011), Process TD Engineer, Intel, Hillsboro, OR
19. L.A. Deibler (2011), Sandia National Laboratory, Albequerque, NM
20. G. Sunny (2011-coadvised), Argonne National Lab, Chicago, ILL
21. H. Lavvafi (2012-coadvised), Carroll Hospital, Washington, DC
22. S.M. Seifi (2015), ASTM, Washington, DC
23. M. Dahar (2017), Arconic, Niles, OH
24. H. Neilson (2018), Exponent, Menlo Park, CA
25. J. Gbur (2018), Research Associate, CWRU, Cleveland, OH
26. W. Gao (2018-co-advised w/Tianjin University), Jiangsu University Sci. and Tech., China
27. B. Palmer (2020), Pratt & Whitney, East Hartford, CT
28. H. Sims (in progress), CWRU, Cleveland, OH
29. Y. Liu (in progress), CWRU, Cleveland, OH
30. A. Ngo (in progress), CWRU, Cleveland, OH
31. D. Scannapieco (in progress), CWRU, Cleveland, OH
32. R. First (in progress), CWRU, Cleveland, OH
33. V. Ramasamy (in progress), CWRU, Cleveland, OH

Postdoctoral Scholars (23):
1. P. Khadkikar (1988-89), Thermo-disc, Mansfield, OH
2. M. Manoharan (1988-90), GE Aviation, Evendale, OH
3. A. Kharchenko (1990), Russia
4. A. Ahmetsoglu (1989-90), Turkey
5. P.M. Singh (1990-93), Professor, Georgia Institute of Technology, Atlanta, GA
6. J. Zhang (1991-92), TRW, Los Angeles, CA
7. S. Patankar (1991-93), ARL, Penn State University, State College, PA
8. C. Liu (1992-93), Thermo-disc, Mansfield, OH
9. R.W. Margevicius (1992-93), Los Alamos National Lab, Los Alamos, NM
10. D. Schwam (1992-93), Research Professor-Retired, CWRU, Cleveland, OH
11. J.D. Rigney (1993, 1996), GE Aviation, Evendale, OH
12. S. Wen (1998), Chinese Academy Sciences, Beijing, China
13. P. Lowhaphandu (2000), Thainox Steel, Bangkok, Thailand
14. B.C. Ko (2001-03), Korea
15. L.O. Vatamanu (2001-06), Nanovat Inc, Cleveland, OH
16. Y. Liu (2005-06), Oregon State University, Portland, OR
17. D. Li (2005-09), Youngstown State University, Youngstown, OH
18. R. Varadarajan (2006-09), Zimmer, Warsaw, IN
19. J.B. Caris (2007-2010), Mesocoat, Cleveland, OH
20. X.J. Gu (2008-2010), Bucknell University, Lewisburg, PA
21. J. Yi, (2012-2014), Shanghai University, Shanghai, China
22. S.M. Seifi, (2016-2018), ASTM, Washington, DC

23. J.L. Gbur, (2018-present), CWRU, Cleveland, OH

Visiting Scholars (22):
1. Y. Wang (1992-93),
2. C. Zhu (1992-93),
3. D.S. Liu (1996-97), Chung-Chen University, Taiwan
4. Z. Liu (1996-97),
5. A. El-Shabasy (2001-03), Ain Shams University, Cairo, Egypt
6. S. Zhang (2002),
7. H. Hassan (2006), Ain Shams University, Cairo, Egypt
8. A. El-Shabasy (2006), Ain Shams Univeristy, Cairo, Egypt
9. H. Hassan (2007-08), Ain Shams University, Cairo, Egypt
10. A. El-Shabasy (2007-08). Ain Shams University, Cairo, Egypt
11. C. Chung (2007), National Sun yat-sen University, Kaohsiung, Taiwan
12. A. El-Shabasy (2009), Ain Shams University, Cairo, Egypt
13. H. Hassan (2009), Ain Shams University, Cairo, Egypt
14. A. El-Shabasy (2010), Ain Shams University, Cairo, Egypt
15. H. Hassan (2010), Ain Shams University, Cairo, Egypt
16. B. Sun (2010-2011), University of Jinan, Jinan, China
17. A. El-Shabasy (2012-13), Ain Shams University, Cairo, Egypt
18. H. Hassan (2012-13), Ain Shams University, Cairo, Egypt
19. H. Hassan Salman (2012), University of Technology, Baghdad, Iraq
20. W. Gao (2015-17), Tianjin University, Tiangin, China
21. J. Luo (2016-17), Northwestern Polytechnical University, Xi'an, China
22. H. Yang (2016-2017), Shenyang University of Technology, Shenyang, China

Staff (5):
1. C. Tuma (1987-2021), CWRU, Cleveland, OH
2. S. Solv'yev (1998), Pratt & Whitney, East Hartford, CT
3. A. Awadallah (2004-06). Ft. Lauderdale, FLA
4. R. Varadarajan (2010), Zimmer, Warsaw, IN
5. R. Tomazin (2013-present), CWRU, Cleveland, OH

Awards Received by Advisees (partial list):
1. Joseph D. Rigney
    - TMS Undergraduate Student Paper Award
    - TMS Graduate Student Paper Award
2. Stuart A. Maloy
    - TMS Hardy Medal
3. Lisa Ellis
    - NSF Graduate Fellowship
4. Anand Samant
    - Institute of Metals (IOM) Charles Hatchett Award for Published Work on Niobium
5. George Sunny
    - NDSEG Graduate Fellowship
6. Lisa Deibler
    - NDSEG Graduate Fellowship
    - TMS Graduate Student Best Paper Contest
7. Katy Lee

- TMS Undergraduate Student Paper Award

8. Hala Hassan
    - Channel Exchange Program with Ain Shams University, Egypt
    - Fulbright Fellowship
9. Joshua Caris
    - National Physical Sciences Consortium Fellowship
10. Janet Gbur
    - 2012 ASTM Project Grant
    - ASTM E08 Fatigue and Fracture Student Presentation Award
    - Zeta Tau Alpha Foundation Fellowship
    - 2016 TMS DeWitt-Smith Scholarship
    - 2016 ASM Student Paper Contest
11. Mohsen Seifi
    - 2013 ASTM Project Grant
    - 2014 ASTM Graduate Scholarship
    - 2014 ASM International Presidents Award
    - 2014 TMS DeWitt-Smith Scholarship
    - 2015 ASTM Graduate Scholarship
12. John Bobanga
    - Veterans Yellow Ribbon Program
13. Dr. Alexander Kharchenko
    - Fulbright Award
14. Wenbin Gao
    - China Student Scholarship Award
15. Prof. Jiao Luo
    - China Professor Scholarship Award
16. Prof. Hongwang Yang
    - China Professor Scholarship Award
17. Francesca Fabe (Beaumont High School)
    - High School Awards in Various Local and State Science Fairs
18. Ryan Devine (University High School)
    - High School Awards in Various Local and State Science Fairs
19. Wesley P Sykes UG Materials Science and Engineering Award Winners
    - JD Rigney, TM Osman, N Corbin, R Iseman, J Brosi, D. Scannapieco
20. Henry Neilson
    - 2017 MS&T Poster Award Competition
    - 2017 Research SHOWCASE Poster Award
    - 2016 Research SHOWCASE Poster Award
    - 2015 Research SHOWCASE Poster Award
21. Ben Palmer
    - 2019 Alpha Sigma Mu
22. David Scannapieco
    - 2019 Alpha Sigma Mu
    - Swanger Fellowship – CWRU
23. Austin Ngo
    - Callahan Fellowship - CWRU