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Curriculum Vitae

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Education

1979-1983	Technion- Israel Institute of Technology, Department of Chemical Engineering, Thesis Advisor- Professor Zehev Tadmor, Degree awarded: Doctor of Science, May 1983
1966-1971	Polytechnic Institute, Jassy, Romania, Department of Chemical Engineering, Degree awarded B.S. and M.S., June 1971

Professional Experience

8/2015-present	Distinguished University Professor
3/2012-present	Thomas W. and Nancy P. Seitz Professor of Advanced Materials and Energy
3/2008-10/2013	Associate Dean of Faculty Development, Case School of Engineering, Case Western Reserve University
7/1994-present	Professor of Macromolecular Science and Chemical Engineering, Department of Macromolecular Science, Case Western Reserve University
7/1990-6/1994	Associate Professor of Macromolecular Science and Chemical Engineering, Department of Macromolecular Science, Case Western Reserve University
8/1985-6/1990	Assistant Professor, Department of Macromolecular Science, Case Western Reserve University
9/1983-7/1985	Visiting Assistant Professor, Department of Chemical Engineering, University of Minnesota, Post-doctoral Advisor- Professor Christopher Macosko
2/1979-10/1979	Research Fellow, Department of Chemical Engineering, Technion - Israel Institute of Technology.
1971-1978	Research Fellow, Research Institute of Chemistry, Bucharest, Romania.

AWARDS AND RECOGNITION

- CWRU Gamma Sigma Alpha Outstanding Faculty
- 2017 ANTEC Plenary Lecture
- 2017 Society of Plastics Engineers Fred E. Schwab Education Award
- Case Western Reserve Distinguished University Professor
- The 2015 Lady Davis Visiting Professor Trust Award at the Technion
- The 2014 ANTEC Technical Plenary Lecture
- The 2012 George S. Whitby Award for Distinguished Teaching and Research awarded by American Chemical Society Rubber Division
- Nominee 2012 Carl F. Wittke Award for Excellence in Undergraduate Teaching
- President-International Polymer Processing Society, 2011-2013
- Nominee 2010 Carl F. Wittke Award for Excellence in Undergraduate Teaching
- President –Elect, International Polymer Processing Society, Spring 2009
- Mather Spotlight Series Prize for Women' s Scholarship, 2009
- 2009 Outstanding Faculty Member award from the Interfraternity Congress and Panhellenic Council of Case Western Reserve University
- Fellow- Society of Plastics Engineers Spring 2006.
- Member-at-Large in the Polymer Processing Society Executive Committee, 2005-2009.
- Editor-in Chief for the Journal of Polymer Engineering 1999-2014.
- Elected chair of the Gordon Research Conference on Computer Aided Engineering in Polymer Processing for 2007.
- International representative for the Americas in the Polymer Processing Society Executive Committee (1994-2005).
- Nominee 2004 B. Jackson Award for Excellence in Undergraduate Mentoring
- Elected to the Board of Directors of Extrusion Division of the Society of Plastics Engineers in May 2000.
- Gutwirth Award for Outstanding Research Assistants, Technion, 1983.
- Gutwirth Award for Outstanding Research Assistants, Technion, 1982.
- Fellowship for Outstanding Students, Polytechnic Institute, Jassy, Romania, 1969-1971.

PROFESSIONAL ACTIVITIES AND SERVICE

Professional Associations

American Institute of Chemical Engineers
International Polymer Processing Society
American Chemical Society
Society of Plastics Engineers
Society of Rheology
ACS-Rubber Division

Professional Service Activities

Symposium Organizer at the PPS –Americas Regional Conference, Boston, MA,
Symposium Organizer at the PPS-32 International Conference, Lyon, France, 2016

President International Polymer Processing Society 2011-2013
Editor of a book on "Mixing and Compounding-Theory and Practice", Hanser Gardner Publications, 2009
Editor-in Chief, Journal of Polymer Engineering 1999-2014
Editorial Board of the Journal of Plastics Technology since 2008
Book Advisory Board for Hanser Publications since April 2001
Technical co-chairman of the Polymer Processing Society annual meeting in June 2004
Symposium Organizer at the AICHE Meeting, Dallas, TX, 1999
Symposium Organizer at the Society of Rheology Meeting, Columbus, OH, 1997
Symposium Organizer at the PPS Meeting, Secaucus, NJ, 1997
Chairman of the AlChE/PPS First Joint Topical Conference on Processing, Structure and Properties of Polymeric Materials, Chicago, IL, 1996
Symposium Organizer at the PPS Meeting, Morgantown, WV, 1993
Symposium Organizer at the SPE-ANTEC Meeting, Montreal, Canada, 1991
Editor of a book on "Mixing and Compounding-Theory and Practice", Hanser Verlag Publisher, 1994
Panel review member for NSF
2006 NSF-DMI Committee of Visitors
External international expert for the Foundation of Science and Technology –Portugal since 2003
Proposal reviewer for NSF, PRF, DOE, NSERC-Canada, European Research Council
Manuscripts reviewer for AICHE Journal, Journal of Rheology, Polymer Science and Engineering, International Polymer Processing, Macromolecules, Chemical Engineering and Science, Journal of Non-Newtonian Fluid Mechanics, Powder Technology, Rubber Chemistry and Technology, Cellulose, Journal of Composite Materials, Composites Science and Technology, ACS Journals
Assessment of peers' performance for promotion and tenure at various national and international institutions

Refereed Journals

1. A. Bandegi, T. Gray, A. Jamei Oskouei, K. Miller McLoughlin, J. Kennedy, S. Mitchell, M. K. Sin, I. Manas-Zloczower, 2023, "Vitrimerization of Crosslinked Poly (Ethylene-Vinyl Acetate): A Mechanochemical Approach for Recycling Thermoset Polymers", Materials Advances, 4, 2648, DOI: 10.1039/d3ma00098b

2. K. McLoughlin, A. Jamei Oskouei, M. Sing, A. Bandegi, S. Mitchell, J. Kennedy, T. Gray, I. Manas-Zloczower, 2022, "Thermomechanical Properties of Crosslinked EVA: A Holistic Approach", ACS Applied Polymer Materials, doi/10.1021/acsapm.2c01928

3. M. Pishvar, M. Amirkhosravi, I Manas-Zloczower, 2022, "Thermomechanical Performance of TPU-PTFE Nanocomposites", ACS Applied Polymer Materials, https://doi.org/10.1021/acsapm.3c00738.

4. R. Foudazi, R. Zowada, I. Manas-Zloczower, D.L. Feke, 2022, "Porous Hydrogels: Present Challenges and Future Opportunities", Langmuir, https://doi.org/10.1021/acs.langmuir.2c02253, (ACS Editor choice).

5. K. Rohm, I. Manas-Zloczower, 2023, "A micromechanical approach to TPU mechanical properties: framework and experimental validation", Mechanics of Materials, 180, 104627.

6. A. Bandegi, M. Montemayor, I. Manas-Zloczower, 2022, "Vitrimerization of Rigid Thermoset Polyurethane Foams: A Mechanochemical Method to Recycle and Reprocess Thermosets", Polymers for Advanced Technology, 2022, 1-9, DOI: 10.1002/pat.5827.

7. A. Bandegi, M. Amirkhosravi, H. Meng, M. Razavi, I. Manas-Zloczower, 2022, "Vitrimerization of Crosslinked Unsaturated Polyester Resins: A Mechanochemical Approach to Recycle and Reprocess Thermosets", Global Challenges, https://doi.org/10.1002/gch2.202200036.

8. K. Ke, Z. Sang, X. Chen, K. Rohm and I. Manas-Zloczower, 2021, "Tuning Mechanical and Electrical Properties of Elastomer Composite with Hybrid Network via Graphene for Stretchable Strain Sensors"Advanced Engineering Materials, DOI:10.1002/adem.202100703

9. L. Yue, M. Amirkhosravi, K. Ke, T. Gray and I. Manas-Zloczower, 2021, "Catalyst-free mechanochemical recycling of biobased epoxy with cellulose nanocrystals", ACS Applied Bio Materials, 4, 5, 4176–4183 doi:10.1021/acsabm.0c01670.

10. X. Gong, P. Yang, K. Rhom, Y. Zhong, B. Zhao, I. Manas-Zloczower, H. Baskiran, D. L. Feke, 2021, "Porous Hollow Fibers with Controllable Structures Templated from High Internal Phase Emulsions", J. Applied Polymer Science, 138(30) 50739, https://doi.org/10.1002/app.50739.

11. L. Yue, M. Amirkhosravi, K. Ke, T. Gray and I. Manas-Zloczower, 2021, "Cellulose nanocrystals: accelerator and reinforcing filler for epoxy vitrimerization", ACS Applied Materials & Interfaces, 2021, 13, 2, 3419–3425, DOI: 10.1021/acsami.0c19350.

12. X. Gong, Z. Sang, H. Guo, K. Ke, I. Manas-Zloczower and D. L. Feke, 2021, "Piezoresistive Strain Sensors Based on Psyllium-Carbon Nanostructure Skeletons", Composites Part B, 209, 108610.

13. K. Rohm, V. Solouki Bonab, I. Manas-Zloczower, 2020, “In-situ TPU/graphene nanocomposites: correlation between filler aspect ratio and phase morphology”, Polymer Engineering & Science, https://doi.org/10.1002/pen.25619.

14. B. Zhao, K. Rohm, F. Wang, X. Gong, I. Manas-Zloczower, D.L. Feke, 2020, “A Compact Volume-Expandable Sorbent (CVES) for Oil and Solvent Capture”, ACS Applied Polymer Materials, https://dx.doi.org/10.1021/acsapm.0c01324.

15. K. Ke, L. Yue, H. Shao, M. Yang, W. Yang, I. Manas-Zloczower, 2020, “Boosting Electrical and Piezoresistive Properties of Polymer Nanocomposites via Hybrid Carbon Fillers: A Review”, Carbon, https://doi.org/10.1016/j.carbon.2020.11.070.

16. X. Gong, K. Rohm, Z. Su, B. Zhao, J. Renner, I. Manas-Zloczower and D. L. Feke, 2020, “Porous hydrogels templated from soy-protein-stabilized high internal phase emulsions”, Journal of Materials Science, 55, 17284–17301.

17. X. Gong, B. Zhao, I. Manas-Zloczower and D. L. Feke, 2020, “Effect of Curing Bath Conditions on the Morphology and Structure of Poly (High Internal Phase Emulsion) Fibers", Journal of Applied Polymer Science, 2020;e50019. https://doi.org/10.1002/app.50019.

18. M. Amirkhosravi, I. Manas-Zloczower, 2021, “Designing Thermal Annealing to Control Mechanical Performance of Thermoplastic Polyurethane Elastomers”, Polymer, 214 123254.

19. M. Amirkhosravi, L. Yue, I. Manas-Zloczower, 2020, “Dusting Thermoplastic Polyurethane Granules with Carbon Nanotubes toward Highly Stretchable Conductive Elastomer Composites”, ACS Applied Polymer Materials, DOI: 10.1021/acsapm.0c00666.

20. L. Yue, M. Amirkhosravi, X. Gong, T. G. Gray, I.Manas-Zloczower, 2020, “Recycling Epoxy by Vitrimerization: Influence of an Initial Thermoset Chemical Structure”, ACS Sustainable Chemistry + Engineering, 8, 33, 12706-12712.

21. B. Zhao, G. Gedler, I. Manas-Zloczower, S. Rowan and D.L.Feke, 2020, “Fluid transport in open-cell polymeric foams: effect of morphology and surface wettability”, SN Applied Sciences, 2020, 2, 189, https://doi.org/10.1007/s42452-020-1983-1.

22. L. Yue, H. Gao, A. Kennedy, A. Patel, X. Gong, T. Ju, T. Gray and I. Manas-Zloczower, 2020, “Vitrimerization: Converting thermoset polymers into vitrimers”, ACS Macro Letters, 9, 836-842.

23. K. Rohm, V. Solouki and I. Manas-Zloczower, 2020, “Quantifying dispersion and distribution of fillers in polymer composites using a refined Shannon entropy”, Composites Science & Technology, 197, 108276.

24. K. Rohm, M. Amirkhosravi and I. Manas-Zloczower, 2020, “Microstructure and Tribological Properties of TPU/Fluoropolymer Composites”, International Polymer Processing Journal, 35(5),415–421, DOI 10.3139/217.3977.

25. K. Ke, Z. Sang, and Ica Manas-Zloczower, 2020, “Hybrid Systems of 3D Carbon Nanostructures with Low Dimensional Fillers for Piezoresistive Sensors”, Polymer Composites, 2020, 41(2), 468, https://doi.org/10.1002/pc.25380.

26. D. Yuan, K. Ke and I. Manas-Zloczower, 2020, “Recyclable Conductive Epoxy Composites with Segregated Filler Network Structure for EMI Shielding and Strain Sensing”, Composites part A, DOI: 10.1016/j.compositesa.2020.105837.

27. H. Guo, L. Yue, G. Rui and .I. Manas-Zloczower, 2020,” Recycling EVA (Poly ethylene-vinyl acetate) with improved properties through dynamic crosslinking”, Macromolecules, 53 (1), 458-464.

28. K. Rohm, I. Manas-Zloczower and D.L.Feke, 2019, “Poly(HIPE) morphology, crosslink density, and mechanical properties influenced by surfactant concentration and composition”, Colloids and Surfaces A,583, 123913.

29. A. Patel, S. Mekala, O.G. Kravchenko, T. Yilmaz, D. Yuan, R. Gross and I. Manas-Zloczower, 2019, “Design and formulation of a completely biobased epoxy structural adhesive”, ACS Sustainable Che. Eng., 7(19), 16382-16391.

30. Y. Qiang, A. Patel and I. Manas-Zloczower, 2020, “Enhancing Microfibrillated Cellulose Reinforcing Efficiency in Epoxy Composites by Graphene Oxide Crosslinking”, Cellulose, DOI :10.1007/s10570-019-02916-w.

31. O. Bijaisoradat, L. Yue, I. Manas-Zloczower and H. Manuspyia, 2020, “Wood flour-high density polyethylene composites: influence of silanization and esterification on mechanical properties”, Journal of Applied Polymer Science, 138 (15), 50197.

32. O. Kravchenko, V. Solouki and I. Manas-Zloczower, 2019, “Spray Assisted Microwave Welding of Thermoplastics using Carbon Nanostructures with Enabled Health Monitoring”, Polymer Engineering & Science, 59 (11), 2247-2254.

33. Z. Sang, H. Guo, K. Ke and I. Manas-Zloczower, 2019, “Effect of Solvent on Segregated Network Morphology in Elastomer Composites for Tunable Piezoresistivity” ,Macromolecular Materials and Engineering, https://doi.org/10.1002/mame.201900278.

34. Z. Sang, K. Ke and I. Manas-Zloczower, 2019, “Hybrid Systems of 3D Carbon Nanostructures with Low Dimensional Fillers for Piezoresistive Sensors”, Composites Part B: Engineering, https://doi.org/10.1002/pc.25380.

35. D. Yuan, V. Solouki Bonab, A. Patel, T. Yilmaz, R.A Gross, and I. Manas-Zloczower, 2020, “Design Strategy for Self-Healing Epoxy Coatings”, Coatings 2020, 10(1), 50; doi:10.3390/coatings10010050

36. Z. Sang, K. Ke and I. Manas-Zloczower, 2019, “Design Strategy for Porous Composites Aimed at Pressure Sensor Application”, Small, 1903487.

37. K. Ke, M. McMaster, W. Christopherson, K. D. Singer, I. Manas-Zloczower, 2019, “Highly sensitive capacitive pressure sensors based on elastomer composites with carbon filler hybrids”, Composites part A, 126,105614.

38. K. Ke, M. McMaster, W. Christopherson, K. D. Singer, I. Manas-Zloczower, 2019, “Effects of branched carbon nanotubes and graphene nanoplatelets on dielectric properties of thermoplastic polyurethane at different temperatures”, Composites Part B, 166, 673-680.

39. R. Foudazi, B. Zhao, P. Gokun, D. L. Feke, S. Rowan, I. Manas-zloczower, 2020, “The Effect of Hydrodynamic Shear on the Evolution of Morphology in High Internal Phase Emulsions (HIPEs), ACS Applied Polymer Materials, *2*(4), 1579-1586.

40. Z. Sang, K. Ke, I. Manas-Zloczower, 2019, “Elastomer Composites with Tailored Interface Network toward Tunable Piezoresistivity: Effect of Elastomer Particle Size”, ACS Applied Polymer Materials, 1 (4), 714-721.

41. K. Ke, Z. Sang, I. Manas-Zloczower, 2019, “Stretchable Elastomer Composites with Segregated Filler Network: Effect of Carbon Nanofiller Dimensionality”, Nanoscale Advances, 1, 2337-2347.

42. D. Yuan, S. Delpierre, K, Ke, JM, Raquez, P, Dubois and I. Manas-Zloczower, 2019, “Biomimetic water-responsive self-healing epoxy with tunable properties “, ACS Advanced Materials & Interfaces, 11, 19, 17853-17862.

43. Z. Sang, K. Ke and I. Manas-Zloczower, 2019, “Effect of carbon nanotube morphology on properties in thermoplastic elastomer composites for strain sensors”, Composites A, 121, 207-212.

44. L. Yue, F. Liu, S. Mekala, A. Patel, R. Gross and I. Manas-Zloczower, 2019, “High performance biobased epoxy nanocomposite reinforced with bacterial cellulose nanofiber network”, ACS Sustainable Chemistry & Engineering, 7 (6), 5986-5992, DOI 10.1021/acssuschemeng.8b06073

45. V. Solouki Bonab, O. Maxian and I. Manas-Zloczower, 2019, “Carbon nanofiller networks- a comparative study of networks formed by branched versus straight carbon

nanotubes in thermoplastic polyurethane", Polymer, 175, 227-234.

46. Z. Sang, K. Ke and I. Manas-Zloczower, 2018, "Interface Design Strategy for the Fabrication of Highly Stretchable Strain Sensors", ACS Applied Materials & Interfaces, 10(42), 36483-36492.

47. O. G. Kravchenko, D. Pedrazzoli, V. Solouki Bonab and Ica Manas-Zloczower, 2018, "Conductive Interlaminar Interfaces for Structural Health Monitoring in Composite Laminates under Fatigue Loading", Materials and Design, 160, 1217-1225.

48. V. Solouki Bonab, V. Karimkhani and I. Manas-Zloczower, 2019, "Ultra-fast self-healing covalent adaptive polyurethane networks", Macromolecular Materials and Engineering, 304, 1800405, https://doi.org/10.1002/mame.201800405.

49. K. Ke, V. Solouki Bonab, D. Yuan and I. Manas-Zloczower, 2018, "Piezoresistive Thermoplastic Polyurethane Nanocomposites with Carbon Nanostructures", Carbon, 139, 52-58.

50. D. Yuan, V. Solouki, A. Patel and I. Manas-Zloczower, 2018, "Self-healing epoxy coatings with enhanced properties and facile processability", Polymer, 147, 196-201, DOI: 10.1016/j.polymer.2018.06.017

51. M. S. McMaster, T E. Yilmaz, A. Patel, A. Maiorana, I. Manas-Zloczower, R.Gross, K. D. Singer, 2018, "Dielectric Properties of Bio-Based Diphenolate Ester Epoxies", ACS Applied Materials and Interfaces, 10 (16), 13924-13930.

52. Patel, O.G. Kravchenko and I. Manas-Zloczower, 2018, "Effect of curing rate on the microstructure and macroscopic properties of epoxy fiberglass composites", Polymers, 10(2), 125; doi:10.3390/polym10020125.

53. L.Yue, V. Solouki Bonab, D. Yuan, A. Patel, V. Karimkhani, I. Manas-Zloczower, 2019, "Vitrimerization: a novel concept to reprocess and recycle thermoset waste", Global Challenges, Vol 3(7), 10.1002/gch2.201800076.

54. O. G. Kravchenko, G. Gedler, S. G. Kravchenko, D. L. Feke and I. Manas-Zloczower, 2018, "Modeling Compressive Behavior of Open-Cell Polymerized High Internal Phase Emulsions: Effects of Density and Morphology" Soft Matter, 14, 1637-1646.

55. L. Yue, A. Maiorana, F. Khelifa, A. Patel, J-M. Raquez, L. Bonnaud, R. Gross, P. Dubois and I. Manas-Zloczower, 2018, "Surface- modified cellulose nanocrystals for biobased epoxy nanocomposites", Polymer, 134, 3, 155-162.

56. V. Solouki Bonab, I. Manas-Zloczower, 2017, "Revisiting Thermoplastic Polyurethane (TPU), from composition to morphology and properties", Journal of Polymer Science: Part B Polymer Physics, Volume 55(20), 1553–1564.

57. L. Yue, A. Maiorana, A. Patel, R. A. Gross, I. Manas-Zloczower, 2017, "A Sustainable Alternative to Current Epoxy Resin Matrices for Vacuum Infusion Molding", Composites Part A, 100, 269-274.

58. X. Qian, O. G. Kravchenko, D. Pedrazzoli, I. Manas-Zloczower, 2018, "Effect of Polycarbonate Film Surface Finish and Plasma Treatment on Mode I and II Fracture Toughness of Interleaved Composite Laminates", Composites Part A: Applied Science and Manufacturing, 105, 138-149, DOI:10.1016/j.compositesa.2017.11.016.

59. O. G. Kravchenko, X. Qian, R. Misiego, S. G. Kravchenko, R. B. Pipes, I. Manas-Zloczower, 2017, "Role of Hierarchical Morphology of Helical Carbon Nanotube Bundles on Thermal Expansion of Polymer Nanocomposites", Journal of Materials Research, 32(14), 2738-2746.

60. O. G. Kravchenko, D. Pedrazzoli, D. Kovtun, X. Qian, I. Manas-Zloczower, 2018, "Incorporation of Plasma-Functionalized Carbon Nanostructures in Composite Laminates for Interlaminar Reinforcement and Delamination Crack Monitoring", Journal of Physics and Chemistry of Solids, 112, 163-170.

61. D. Varghai, A. Maiorana, Q. Meng, R. Gross, I. Manas-Zloczower, 2016, "Sustainable, Electrically-conductive Bioepoxy Nanocomposites", Polymer, 107(19), 292-301.

62. O. G. Kravchenko, R. Misiego, S. G. Kravchenko, R. B. Pipes, I. Manas-Zloczower, 2016, "Modeling of Hierarchical Morphology of Carbon Nanotube Bundles in Polymer Composites", Macromolecular Theory and Simulations, DOI: 10.1002/mats.201600064.

63. Patel, A. Maiorana, L. Yue, R. A. Gross, I. Manas-Zloczower, 2016, "Curing Kinetics of Biobased Epoxies for Tailored Applications", Macromolecules, 49 (15), 5315–5324.

64. O. Maxian, D. Pedrazzoli, I. Manas-Zloczower, 2017, "Conductive polymer foams with carbon nanofillers – Modeling percolation behavior", Polymer Express, 11 (5), 406-418.

65. D. Yuan, D. Pedrazzoli, G. Pircheraghi, I. Manas-Zloczower, 2016, "Melt compounding of thermoplastic polyurethanes incorporating 1D and 2D carbon nanofillers", Polymer–Plastics Technology and Engineering Journal, doi.org/10.1080/03602559.2016.1233265.

66. V. Solouki Bonab, I. Manas-Zloczower, 2016, "Chemorheology of Thermoplastic Polyurethane and Thermoplastic Polyurethane/Carbon Nanotube Composite Systems", Polymer, 99, 513-520.

67. Maiorana, L. Yue, I. Manas-Zloczower and R. Gross, 2016, "Structure Property Relationships of a Bio-Based Reactive Diluent in a Bio-Based Epoxy Resin", Journal of Applied Polymer Science, 133 (45) J. APPL. POLYM. SCI. 2016,DOI:10.1002/APP.4363543635.

68. D. Yuan, D. Pedrazzoli, I. Manas-Zloczower, 2016, "Synergistic effects in thermoplastic polyurethanes incorporating hybrid carbon nanofillers", International Polymer Processing,

31(5), 554-562.

69. D. Pedrazzoli, I. Manas-Zloczower, 2016, “Understanding phase separation and morphology in thermoplastic polyurethanes nanocomposites”, Polymer, 90, 256-263.

70. G. Pircheraghi, T. Powell, V. Solouki Bonab, I. Manas-Zloczower, 2016, “Effect of carbon nanotube dispersion and network formation on thermal conductivity of thermoplastic polyurethane / carbon nanotube nanocomposites”, Polymer Engineering and Science, Volume 56(4), 394–407.

71. O. Maxian, D. Pedrazzoli, I. Manas-Zloczower, 2015, “Modeling the electrical percolation behavior of hybrid nanocomposites based on carbon nanotubes and graphene nanoplatelets”, Materials Research Express, 2 095013 doi:10.1088/2053-1591/2/9/095013.

72. Q. Meng, I. Manas-Zloczower, 2015, “Carbon Nanotubes Enhanced Cellulose Nanocrystals Films with Tailorable Electrical Conductivity”, Composites Science and Technology, DOI:10.1016/j.compscitech.2015.10.008.

73. Z. Emami, Q. Meng, G. Pircheraghi, I. Manas-Zloczower, 2015, “Use of surfactants in cellulose nanowhisker/epoxy nanocomposites: Effect on filler dispersion and system properties”, Cellulose, DOI: 10.1007/s10570-015-0728-6.

74. N. K. Mahanta, M. R. Loos, A. R. Abramson, I. Manas Zlocozower, 2015, “Graphite-Graphene Hybrid Filler System for High Thermal Conductivity of Epoxy Composites”, Journal of Materials Research, 30, 959-966.

75. L.Yue, G. Pircheraghi, S.A. Monemian, I. Manas-Zloczower, 2014, “Epoxy composites with carbon nanotubes and graphene nanoplatelets - Dispersion and synergy effects”, Carbon, 78, 268-278

76. G. Pircheraghi, R. Foudazi, I. Manas-Zloczower, 2015, “Methods for Evaluation of Carbon Nanotube Dispersion at Different Length Scales”, Powder Technology, 276. 222-231.

77. R. Foudazi, P. Gokun, D.L. Feke, S. Rowan, I. Manas-Zloczower, 2013, “Chemorheology of Poly(High Internal Phase Emulsions)”, Macromolecules, 46(13), 5393-5396. http://dx.doi.org/10.1021/ma401157b

78. Y.Y. Law, D. L. Feke and I. Manas-Zloczower, 2014, “Modeling of the Torque Requirements for the Mixing and Dispersion of Silica into Rubber”, International Polymer Processing Journal, 29(1), 112-118.

79. Y.Y. Law, D. L. Feke and I. Manas-Zloczower, 2013, “Thermogravimetric Analysis of the Kinetics of Bound Rubber Formation on Surface-Modified Silica”, Rubber Chemistry & Technology, 87(2) 311-319 http://dx.doi.org/10.5254/rct.13.86980

80. Y.Y. Law, D. L. Feke and I. Manas-Zloczower, 2013, “Thermogravimetric Analysis of the Kinetics of the Reaction of Alkoxysilane with Silica” Rubber Chemistry & Technology, 87 (3), 443-450 http://dx.doi.org/10.5254/rct.13.87898

81. Y.Y. Law, D. L. Feke and I. Manas-Zloczower, 2013, “Method for Probing the Microstructure of Particle Beds Using Infiltration Behavior” Powder Technology, 237, 427-431.

82. M. R. Loos, I. Manas-Zloczower, 2013, “Micromechanical models for carbon nanotube and cellulose nanowhisker reinforced composites”, Polymer Engineering and Science, 53, 882–887.

83. M. R. Loos, J. Yang, D.L. Feke, I. Manas-Zloczower, S. Unal, U. Younes, 2013, “Enhancement of Fatigue Life of Polyurethane Composites Containing Carbon Nanotubes", Composites: Part B, 44, 740-744.

84. M. R. Loos, J. Yang, D.L. Feke, I. Manas-Zloczower, 2012, “Enhanced Fatigue Life of Carbon Nanotube Reinforced Epoxy Composites”, Polymer Engineering and Science, 52, 1882-1887.

85. J. Yang, M. R. Loos, D.L. Feke, I. Manas-Zloczower, 2012, “The Effect of Dispersants on the Tensile Properties of Carbon Nanotube/Vinyl Ester Composites”, Polymer Composites, 33, 412-19.

86. M. Sing, M.R. Loos, I. Manas-Zloczower, D.L. Feke, 2012, “Dispersion of Particulate Clusters via the Rapid Vaporization of Interstitial Liquid”, Powder Technology 215-216, 223–226.

87. M. R. Loos, J. Yang, D.L. Feke, I. Manas-Zloczower, 2012, “Effect of Block-copolymer Dispersants on Properties of Carbon Nanotube/Epoxy Systems”, Composites Science and Technology, 72, 482-488.

88. M. Loos, I. Manas-Zloczower, 2012, “Reinforcement Efficiency of Carbon Nanotubes - Myth and Reality”, Macromolecular Theory and Simulations, 21, 130-137.

89. L. Bava, D.L.Feke, I. Manas-Zloczower, S.J. Rowan, 2011, “Model for the Hydrodynamic Dispersion of Agglomerates Incorporating Thermoresponsive Additives”, Journal of Polymer Engineering 31, 5-12

90. N. Domingues, M.Camesasca, M. Kaufman, I. Manas-Zloczower, A.Gaspar-Cunha, J.A. Covas, 2010, “Modeling of Agglomerate Dispersion in Single Screw Extruders”, International Polymer Processing, 25(3), 251-257.

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<u>Plenary, Keynote and Invited Presentations</u>

1. A. Bandegi, I. Manas-Zloczower, 2023, " Vitrimerization: A Novel Concept to Recycle Thermoset Waste via Dynamic Chemistry", PPS-38, St.Gallen, Switzerland, May 22-26, 2023, (**keynote lecture**).

2. A. Bandegi, I. Manas-Zloczower, 2022, " Vitrimerization: A Novel Concept to Recycle Thermoset Waste via Dynamic Chemistry", ACS National Meeting, Chicago, August 21-25, 2022, **(keynote lecture).**

3. K. Rohm, V. Solouki, I. Manas-Zloczower, 2022, "Is TPU a two-phase or three-phase composite?", PPS-37, Fukuoka, Japan, April 11-15, 2022 **(keynote lecture).**

4. L. Yue and I. Manas-Zloczower, 2021, "Vitrimerization: A Novel Concept to Recycle Thermoset Waste via Dynamic Chemistry", PPS-36, Montreal, Canada, September 26-30, 2021 **(keynote lecture)**.

5. K. Ke, Z. Sang, D. Yuan, I. Manas-Zloczower, 2019, "Segregated structure polymer nanocomposites", PPS Europe/Africa Regional Conference, Pretoria, South Africa, November 18-22, 2019 **(keynote lecture).**

6. V. Solouki, K. Rohm, I. Manas-Zloczower, 2019," Designing TPU/carbon nanofiller nanocomposites with targeted properties: A roadmap for filler selection", PPS-35, Cesme, Turkey, May 25-29, 2019 **(keynote lecture)**.

7. A. Patel, S. Mekala, X. Wang, O. Kravchenko, D. Yuan, R. Gross, I.Manas-Zloczower, 2018, "Design and formulation of biobased structural adhesives", PPS America Regional Conference, Boston, MA, November 5-8, 2018 **(keynote lecture).**

8. A. Patel, S. Mekala, X. Wang, O. Kravchenko, D. Yuan, R. Gross, I.Manas-Zloczower, 2018, "Design and formulation of biobased structural adhesives", BEPS 2018 25th Anniversary Meeting, Troy, N.Y., August 15-17, 2018 **(invited lecture)**.

9. L. Yue, A. Patel, Y. Qiang and I. Manas-Zloczower, 2018, "Engineering structural composites using bio-based materials", Biotech France, Paris June 25-27, 2018 **(keynote lecture).**

10. I. Manas-Zloczower, 2018, "Shaping the Future: Sustainability and the Plastic Industry", PPS-34, Taipei, Taiwan, May 21-25, 2018 (**Plenary lecture).**

11. O. G. Kravchenko, D. Pedrazzoli, I. Manas-Zloczower, 2017, "Fatigue and Structural Health Monitoring of Delamination in Composite Materials", PPS Europe/Africa Regional Conference, Dresden, Germany, June 25-29, (**keynote lecture).**

12. I. Manas-Zloczower, 2017, "Tailoring bio based epoxies for various applications", Green chemistry – white biotechnology : the industry of the future GreenWinConference, Mons, Belgium, May 22-23, 2017 (**keynote lecture**).

13. I. Manas-Zloczower, 2017, "Shaping the Future: Sustainability and the Plastic Industry", ANTEC, Anaheim, CA, May 8-10, 2017 (**Plenary lecture).**

14. I. Manas-Zloczower, 2017, “Mixing Challenges in Polymer Nanocomposites: Obstacles and Opportunities”, Anaheim, CA, ANTEC, May 8-10, 2017 (**keynote lecture).**

15. O. Maxian, D. Pedrazzoli, I. Manas-Zloczower, 2016, “Modeling the Percolation Behavior in Bulk and Foam Polymers with Carbon Nanofillers”, PPS-32 International Conference, Lyon, France, July 25-30, 2016 (**keynote lecture**).

16. I. Manas-Zloczower, 2015, “Mixing Challenges in Elastomer Nanocomposites: Obstacles and Opportunities”, Latin American International Rubber Conference, Antigua, Guatemala, November 23-27, 2015 (**keynote lecture**).

17. I. Manas-Zloczower, 2015, “Synergistic Effects of Carbon Nanotubes and Graphene in Thermoplastic Polyurethane Nanocomposites”, International Conference on “Polymer processing with resulting morphology and properties: feet in the present and eyes at the future”, Salerno, October 15-17, 2015 (**invited presentation**).

18. I. Manas-Zloczower, V. Souluki-Bonab, 2015, “ Chemorheology studies for TPU and TPU/CNT systems”, PPS-31 International Conference, Jeju, Korea, June 7-11, 2015 (**keynote lecture** at the Honorary session for Prof. Sung Chul Kim).

19. I. Manas-Zloczower, 2015, “Challenges in Mixing Biofillers in Composite Materials”, PPS-31 International Conference, Jeju, Korea, June 7-11, 2015 (**keynote lecture**).

20. I. Manas-Zloczower, 2015, “Challenges in Mixing Biofillers in Composite Materials”, 1st PIRE Workshop on Biobased Polymers and Materials, Houffalize, Belgium, May 20, 2015, **(invited presentation).**

21. I. Manas-Zloczower, 2015, “Challenges in Nanocomposites: Mixing-Obstacles and Opportunities”, Technion, Israel Institute of Technology, April 28, 2015 **(invited lecture)**.

22. I. Manas-Zloczower, 2015, “Filler Dispersion: Mechanisms and Governing Factors”, Industrial Engineering Department, University of Salerno, Salerno, Italy, March 6, 2015 **(invited lecture)**.

23. I. Manas-Zloczower, 2015, “Mixing –Modeling and Characterization”, Industrial Engineering Department, University of Salerno, Salerno, Italy, March 9, 2015 **(invited lecture)**.

24. I. Manas-Zloczower, 2015, “Challenges in Nanocomposites: Mixing-Obstacles and Opportunities”, Industrial Engineering Department, University of Salerno, Salerno, Italy, March 10, 2015 **(invited lecture)**.

25. I. Manas-Zloczower, 2014, “Challenges in Nanocomposites: Mixing - Obstacles and Opportunities” Thailand Polymer Society, December 23, 2014 **(Invited Lecture).**

26. I. Manas-Zloczower, 2014, “Mixing in Nanocomposites: Some Unanswered Questions…”, PPS – Europe/Africa Conference, Tel-Aviv, Israel, October 19-21, 2014 **(keynote lecture).**

27. I. Manas-Zloczower, 2014, “Carbon Nanotube Dispersion in Composite Materials- Challenges and Potential Solutions”, TechConnect World 2014, Washington DC, June 15-19, 2014 **(invited lecture).**

28. I. Manas-Zloczower, G. Pircheraghi, Q. Meng, 2014, “Challenges in using ultrasonication for dispersion of nanofillers in polymeric media”, PPS-30 International Conference, Cleveland, June 8-12, 2014 **(invited lecture).**

29. I. Manas-Zloczower, 2014, “Challenges in Nanocomposites -Mixing and Interfacial Interactions”, PPS-30 International Conference, Cleveland, June 8-12, 2014 **(keynote lecture).**

30. I. Manas-Zloczower, 2014, “Challenges in Nanocomposites: Mixing - Obstacles and Opportunities” ANTEC, April 28-30, 2014 **(Plenary Technical Lecture).**

31. I. Manas-Zloczower, 2014, “Mixing –Modeling and Characterization”, TOPCON 2014, Cleveland, March 11, 2014 **(invited lecture).**

32. G. Pircheragi, T. Powell and I. Manas-Zloczower, 2013, “Quantitative assessment of carbon nanotube dispersion using rheology”, PPS-29 International Conference, Nuremberg, Germany, July 15-22, 2013 **(keynote lecture).**

33. G. Pircheragi, T. Powell and I. Manas-Zloczower, 2013, “Comparative Study of Carbon Nanotube Dispersion Evaluation Methods”, MACRO Frontiers 2013, Cleveland, June 6-8, 2013 (**invited lecture).**

34. R. Foudazi, D.L. Feke, S.J. Rowan and I. Manas-Zloczower, 2012, “Dynamic Characterization of High Internal Phase Emulsions During Polymerization”, PPS International Conference, Pattaya, Thailand, December 11-15, 2012 **(plenary lecture)**.

35. M. Loos and I. Manas-Zloczower, 2012, “Micromechanical Models for Polymer Composites Containing Rod-like Nanofillers”, PPS International Conference, Pattaya, Thailand, December 11-15, 2012 **(invited lecture)**.

36. I. Manas-Zloczower, 2012, “From Mixing Fundamentals to Advanced Materials and Energy”, Thomas W. and Nancy P. Seitz Chairing Ceremony, October 10, 2012.

37. I. Manas-Zloczower and M. Loos, 2012, “Carbon Nanotube Reinforced Composites for Wind Turbine Blades”, PPS America Regional Conference, Niagara Falls, Canada, May 20-23, 2012 **(keynote lecture).**

38. I. Manas-Zloczower, 2012, “Fundamentals of Filler Mixing in Rubber”, Rubber Division Meeting, San Antonio, Tx, April 22-25, 2012 **(invited lecture).**

39. M. Loos, J. Yang, D.L. Feke and I. Manas-Zloczower, 2012, "Selecting Dispersing Agents for Thermoset/Carbon Nanotube Masterbatches", ANTEC, Orlando, FL, April 1-5, 2012 **(invited lecture).**

40. M. Loos and I. Manas-Zloczower, 2012, "Predicting Mechanical Properties of Nanocomposites", ANTEC-2012 Fellow Forum, Orlando, FL, April 1-5, 2012 **(invited lecture).**

41. I. Manas-Zloczower, 2012, "Filler Dispersion: Mechanisms and Governing Factors", São Carlos Advanced School on Materials Science & Engineering, UFSCar, São Carlos, Brazil, March 25-31, 2012 **(invited lecture).**

42. I. Manas-Zloczower, 2012, "Mixing Modeling and Characterization", São Carlos Advanced School on Materials Science & Engineering, UFSCar, São Carlos, Brazil, March 25-31, 2012 **(invited lecture).**

43. I. Manas-Zloczower and M. Loos, 2011, "Micromechanical Models for Polymer Nanocomposites", Israel Polymers and Plastics Society 40th Conference, Tel-Aviv, Israel, December 15, 2011 (**plenary lecture**).

44. I. Manas-Zloczower, 2011, "Fundamentals of Filler Mixing in Polymers", Latin-American Conference on Rubber Technology, Medellin, Columbia, November 7-11, 2011 **(plenary lecture).**

45. I. Manas-Zloczower, 2011, "Rubber Mixing – Modeling and Characterization", Latin-American Conference on Rubber Technology, Medellin, Columbia, November 7-11, 2011 (**plenary lecture).**

46. M. Loos, J. Yang, D.L. Feke and I. Manas-Zloczower, 2011, "Epoxy/Carbon Nanotubes Composites for Wind Turbine Blades", Nanotechnology Developments and Commercialization Activities in Ohio", Akron/Cleveland SPE Mini Technical Conference, Akron, October 17, 2011 **(invited presentation)**.

47. I. Manas-Zloczower, 2011, "Fundamentals of Filler Mixing in Polymers", EuroFillers 2011, Dresden, Germany, August 21-25, 2011 **(plenary lecture)**.

48. M. Loos, I. Manas-Zloczower, 2011, "Reinforcement Efficiency of Carbon Nanotubes - Myth and Reality", PPS-27 Annual meeting, Marrakesh, Morocco, May 10-14, 2011 **(keynote lecture).**

49. I. Manas-Zloczower, 2011, "Fundamentals of Fine Particle Mixing in Polymer", Workshop for Mold & Molding Technology '11, Chung-Li, Taiwan, April 6-9, 2011 **(plenary lecture).**

50. I. Manas-Zloczower, 2010, "Fundamentals of Fine Particle Mixing in Polymer", 14th International Conference on Polymeric Materials, Halle, Germany, September 15-17, 2010 **(plenary lecture).**

51. M. Camesasca, W. Hartt, I. Manas-Zloczower, 2010, "High Internal Phase Emulsions - Rheology and Microstructure in Various Flow Regimes", PPS-26 Annual meeting, Banff, Canada, July 3-8, 2010 **(keynote lecture)**.

52. I. Manas-Zloczower, 2009, "Thermoresponsive Binders – A Means to Control Fine Particle Dispersion", **Eli Rubin Memorial Lecture**, Technion, November 24, 2009, Technion, Israel.

53. M. Camesasca, W. Hartt, I. Manas-Zloczower, 2009, "Rheological behavior of high internal phase emulsions in transient and steady flow regimes", PPS-Regional meeting, Larnaca, Cyprus, October 18-21, 2009 **(keynote lecture)**.

54. I. Manas-Zloczower, 2009, "Thermoresponsive Binders –A Means to Control Fine Particle Dispersion", APST-One-Advances in Polymer Science and technology, Linz, Austria, July 8-10, 2009 **(keynote lecture)**.

55. L. Bava, D. L. Feke, I. Manas-Zloczower, S.J. Rowan, 2009, "Thermoresponsive Binders –A Means to Control Silica Dispersion", Rubber Division –Centennial Meeting, Akron, May 2009 **(invited lecture)**.

56. I. Manas-Zloczower, 2009, "Thermoresponsive Binders –A Means to Control Fine Particle Dispersion", PPS-25 Annual meeting, Goa, India, March 1-5, 2009 **(plenary lecture)**.

57. L. Bava, D. L. Feke, I. Manas-Zloczower, S.J. Rowan, 2008, "Use of Thermoresponsive Binders: A Route to Achieve Temperature-Controlled Dispersion of Fine Particle Clusters", PPS-24, Annual meeting, Salerno, Italy, June 15-19 (**keynote lecture)**.

58. I. Manas-Zloczower, 2008, "Entropy and Fractals: A Route to Mixing and Microstructure Analysis in Polymer Processing", International Colloquium of the Research Institute for Plastics and Rubber, Medellin, Colombia, February 27 - 29, (**keynote lecture)**.

59. I. Manas-Zloczower, 2007, "Entropy and Fractals: A Route to Mixing and Microstructure Analysis in Polymer Processing", 9th Brazilian Polymer Congress, Campina Grande, Paraiba, Brazil, October 7-11 (**plenary lecture)**.

60. I. Manas-Zloczower, 2007, "Agglomerate Dispersion – Mechanisms and Modeling", EUROFILLERS 2007, Zalakaros, Hungary, August 26-30 (**invited lecture)**.

61. L. Bava, D. L. Feke, I. Manas-Zloczower, S.J. Rowan, 2007, "Controlling Dispersion Behavior of Fine Particles through Use of Responsive Binders", PPS-23, Annual meeting, Salvador, Brazil, May 27-31 (**plenary lecture)**.

62. L. Bava, D.L. Feke, I. Manas-Zloczower, S. J. Rowan, 2007, "Responsive Binders for Controlling Dispersion Behavior of Silica Clusters", ACS-Rubber Division Meeting, April 30-May 2 (**invited lecture)**.

63. I. Manas-Zloczower, 2006, "Fractal Analysis – A Tool for Microstructure Characterization in Polymer Processing", PPS Regional meeting, Pretoria, South Africa, October 9-13 (**plenary lecture**).

64. I. Manas-Zloczower, 2005, "Fine Particle Clusters Dispersion – Mechanisms and Modeling", PPS Regional meeting, Quebec City, Canada, August 14-17 (**plenary lecture**).

65. M. Fanelli, D.L. Feke and I. Manas-Zloczower, 2005, "Modeling the Dynamics of Dispersion of Particle Clusters in the Nano-Scale", PPS-21, Annual meeting, Leipzig, Germany, June 19-23 (**keynote lecture**).

66. I. Manas-Zloczower, 2004, "Quantitative analysis of mixing in extrusion processes", SoftEXTRUSION-2004 workshop National Science Foundation, NSF/Luso-American Development Foundation, FLAD, Alvor, Portugal, October 14-18 (**invited presentation**).

67. I. Manas-Zloczower, 2004, "Fundamentals of polymer melt flow in single screw extruders – from analytical modeling to computer simulations", SoftEXTRUSION-2004 workshop National Science Foundation, NSF/Luso-American Development Foundation, FLAD, Alvor, Portugal, October 14-18 (**invited presentation**).

68. I. Manas-Zloczower, 2004, "Entropic Measures of Mixing Tailored for Various Applications", PPS Regional meeting for Asia, Gyeongju, Korea, August 29-September 1 (**keynote lecture**).

69. K. Alemaskin, M. Camesasca, I. Manas-Zloczower and M. Kaufman, 2004, "Entropic Measures of Mixing Tailored for Various Applications", NUMIFORM-2004, Columbus, OH, June 13-16 (**invited lecture**).

70. K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2002, "Simultaneous characterization of dispersive and distributive mixing in continuous polymer processing equipment", PPS-Regional meeting, Taipei, Taiwan, November 4-8 (**keynote lecture**).

71. I. Manas-Zloczower, W. Wang and M. Kaufman, 2002, "Chaotic Features of Flow in Polymer Processing Equipment – Relevance to Distributive Mixing" PPS-18 Annual Meeting, Guimaraes, Portugal, June 16-20 (**keynote lecture**).

72. I. Manas-Zloczower, A. Scurati and D. L. Feke, 2002, "Factors Affecting Mechanisms and Kinetics of Agglomerate Dispersion", Frontiers in Rubber Science Colloquium, ACS-Rubber Division Meeting, Savannah, GA, April 29-May1 (**invited lecture**).

73. I. Manas-Zloczower, 2001, "Factors Affecting Kinetics of Agglomerate Dispersion and More…", Israel Society of Plastics Engineers" meeting, Tel-Aviv, Israel, December 13 (**plenary lecture**).

74. I. Manas-Zloczower, 2001, "Factors Affecting Mechanisms and Kinetics of Agglomerate Dispersion", Gordon Research Conference on Elastomers, Colby Sawyer, NH, August 5-10

(**invited lecture**).

75. I. Manas-Zloczower, 2001, "Dynamics of Minor Component Size and Spatial Distributions in Mixing Using Continuous Processing Equipment, Gordon Research Conference on CAE in Polymer Processing, Ventura, CA, March 4-9 (**invited lecture**).

76. I. Manas-Zloczower, 2001, "Mechanisms and Kinetics of Agglomerate Dispersion", Functional Tire Fillers 2001, Fort Lauderdale, FL, January 29-31 (**invited lecture**).

77. I. Manas-Zloczower, 2000, "Factors Affecting Mechanisms and Kinetics of Agglomerate Dispersion", PPS Europe/Africa Regional Meeting, Zlin, Czech Republic, August 16-18 (**keynote lecture**).

78. Manas-Zloczower, 2000, "Analysis of Mixing Efficiency in Processing Equipment through Flow Simulations", 16th PPS Annual Meeting, Shanghai, China, June 18-23 (**keynote lecture**).

79. I. Manas-Zloczower, 2000, "Mechanisms and Kinetics of Agglomerate Dispersion", Frontiers in Rubber Science, ACS Rubber Division Meeting, Dallas, Texas, April 4-6 (**invited lecture**).

80. I. Manas-Zloczower, 1999, "Influence of Structure and Interfacial Properties on Kinetics of Agglomerate Dispersion", 15th PPS Annual Meeting, 'S-Hertogenbosch, Netherlands, May 31 –June 4 (**plenary lecture**).

81. I. Manas-Zloczower, 1998, " Recent Developments in the Modeling of Rubber Mixing", International Rubber Conference, Paris, France, May 12-14 (**plenary lecture**).

82. C.H.Yao and I. Manas-Zloczower, 1997, "Influence of Design on Mixing Efficiency in a VIC Mixer", Rubber Division Meeting, Cleveland, OH, October 21-24 (**invited presentation**).

83. I. Manas-Zloczower, 1997, Gordon Research Conference on CAE in Polymer Processing, Ventura, California, February 16-21 (**invited speaker**).

84. H. Yamada, D. L. Feke and I. Manas-Zloczower, 1996, "Influence of Matrix Infiltration on Agglomerate Dispersibility", 12th Annual PPS Meeting, Sorrento, Italy, May 27-31 (**keynote speaker**).

85. I. Manas-Zloczower, 1996, "Analysis of Mixing Efficiency in Polymer Processing Equipment", European Symposium on Polymer Blends, Maastricht, The Netherlands, May 12-15 (**invited speaker**).

86. F. Bohin, I. Manas-Zloczower and D. L. Feke, 1996, "Analysis of Batch Compounding Using a Dispersion Model for Single Agglomerates", ACS- Rubber Division Meeting,

Montreal, Canada, May 5-8 (**invited presentation**).

87. I. Manas-Zloczower, 1995, "Analysis of Mixing Efficiency in Mixing Equipment", Compounding '95: Advances in Plastics Compounding for Performance and Profits, Philadelphia, Pennsylvania, August 28-29, (**invited presentation**).

88. I. Manas-Zloczower, 1995, Gordon Research Conference on Elastomers, Networks and Gels, New London, New Hampshire, July 23-28 (**invited speaker**).

89. I. Manas-Zloczower, 1995, "The Study of Mixing Efficiency in Polymer Processing Equipment through Simulation", CWRU Research Day, Cleveland, Ohio, April 26 (**invited presentation**).

90. H. H. Yang, C. H. Yao and I. Manas-Zloczower, 1994, "Analysis of Mixing Performance in a VIC Mixer", PPS European Regional Meeting, Strasbourg, France, August 29-31 (**keynote speaker**).

91. I. Manas-Zloczower, 1994, "Studies of Mixing Efficiency in Batch and Continuous Mixers", Advances in Additives and Modifiers for Polymer Blends Conference, Clearwater Beach, Florida, February 23-25 (**invited presentation**).

92. I. Manas-Zloczower, 1987, "Mechanisms of Dispersive Mixing", 44th Research Symposium for Industrial Sponsors, Department of Macromolecular Science, Case Western Reserve University, Cleveland, Ohio, Nov 4-5 (**invited presentation**).

93. I. Manas-Zloczower, A. Nir and Z. Tadmor, 1984, "Dispersive Mixing in Roll- Mills", NRCC-IMRI Symposium "Composites-84", Montreal, Canada, November 20 (**invited presentation**).

94. I. Manas-Zloczower, A. Nir and Z. Tadmor, 1983, "Dispersive Mixing in Rubber and Plastics: A Review", ACS, Rubber Division Meeting, Symposium on Role of Dispersion in Polymeric Systems, Houston,Texas, October 26-27, (**invited presentation**).

Invited Seminars in Academia and Industry

2022	(December)	Technion- Israel Institute of Technology, Israel
2022	(December)	Shenkar College of Engineering, Israel
2019	(October)	University of Connecticut, Storrs
2017	(May)	University of Mons, Mons, Belgium
2017	(May)	Eindhoven University, The Netherlands

2017	(May)	DSM, The Netherlands
2017	(March)	Cabot, Billerica, MA
2015	(May)	Technion, Israel Institute of Technology
2014	(May)	Beijing University of Chemical Technology, China
2014	(May)	Northern University of Technology, Xian, China
2014	(May)	Shanghai Jiao Tong University, China
2013	(October)	University of Wisconsin, Department of Mechanical Engineering, Madison, WI
2010	(December)	Chulalongkorn University, Bangkok, Thailand
2009	(November)	PPG Monroeville Chemical Center, Pittsburgh, PA
2008	(October)	Iowa State University, Ames, Iowa
2008	(April)	CWRU- Department of Mechanical Engineering
2007	(August)	Goodyear Rubber & Tire Company, Akron, OH
2007	(March)	Colorado State University, Fort Collins, CO
2006	(December)	Chulalongkorn University, Bangkok, Thailand
2006	(October)	University of Illinois, Urbana-Champaign, Ill
2005	(May)	Beijing University of Chemical Technology
2005	(January)	Chulalongkorn University, Bangkok, Thailand
2004	(October)	Bridgestone/Firestone Company, Akron, Ohio
2004	(February)	Oklahoma University, Department of Chemical Engineering, Norman, OK
2003	(October)	Rheology Research Center, University of Wisconsin, Madison,Wisconsin.
2003	(January)	Chulalongkorn University, Bangkok, Thailand
2002	(April)	IFPRI Technical Symposium CWRU,

		Cleveland, Ohio
2002	(March)	AES-Exxon Mobile Technical Exchange Meeting, Cuyahoga Falls, Ohio
2001	(July)	Bridgestone/Firestone Company, Akron, Ohio
2001	(February)	University of Akron, Department of Polymer Engineering, Akron, Ohio
2000	(October)	Abbot Company, Ashtabula, Ohio
2000	(March)	Dow Chemical Company, Midland, Michigan
1999	(October)	Pirrelli Conference, Milan, Italy
1999	(October)	Laval University, Department of Chemical Engineering, Quebec, Canada
1999	(July)	GE, Schenectady, New York
1999	(June)	GE, The Netherlands
1999	(April)	Ohio State University, Department of Chemical Engineering, Columbus, Ohio
1999	(March)	Bridgestone Research Center, Akron, Ohio
1999	(March)	University of Akron, Department of Polymer Engineering, Akron, Ohio
1998	(October)	University of Wisconsin, Department of Mechanical Engineering, Madison,Wisconsin.
1998	(April)	Technion, Department of Chemical Engineering, Haifa, Israel
1998	(March)	West Virginia University, Department of Chemical Engineering, Morgantown, West Virginia
1998	(March)	DuPont Rheology Network, Wilmington, Delaware
1998	(February)	Allied Signal Research Center, Morristown, New Jersey

1997	(December)	Chulalongkorn University, Bangkok, Thailand
1997	(June)	DuPont Experimental Station, Wilmington, Delaware
1997	(April)	Rheology Research Center, University of Wisconsin, Madison, Wisconsin
1997	(April)	3M Company, St. Paul, Minnesota
1997	(February)	California Institute of Technology, Department of Chemical Engineering, Pasadena, California
1997	(February)	Raychem Corporation, Menlo Park, California
1996	(September)	Union Carbide, Weston Canal Center, Somerset, NJ
1996	(September)	Pomini Seminar, University of Akron, Akron, Ohio
1996	(July)	Dow Corning Corporation, Midland, Michigan
1996	(June)	NIST-Industry Consortium Meeting, Washington, D. C.
1996	(January)	Chulalongkorn University, Bangkok, Thailand
1995	(November)	Pomini, Milano, Italy
1995	(October)	University of Kentucky, Department of Chemical and Materials Engineering, Lexington, Kentucky
1995	(August)	The Goodyear Tire and Rubber Company, Akron, Ohio
1995	(June)	Technion-Israel Institute of Technology, Department of Chemical Engineering, Haifa, Israel
1994	(November)	Rhone-Poulenc Research Center, Paris, France
1994	(October)	DuPont Experimental Station, Wilmington, Delaware
1994	(June)	Kerr McGee Corporation, Oklahoma City, Oklahoma

1994	(May)	University of Akron, International Symposium on Mixing, Akron, Ohio
1994	(May)	National Institute of Standards and Technology Washington, D.C.
1994	(May)	Quantum, USI Division, Allen Research Center, Cincinnati, Ohio
1994	(February)	Cabot Conference on Dispersion Cambridge, Massachusetts
1994	(January)	Pomini, Milano, Italy
1993	(November)	University of Akron, Akron, Ohio
1993	(November)	Eindhoven University of Technology, Eindhoven, The Netherlands
1993	(July)	5th International Seminar on Elastomers, Akron, Ohio
1993	(June)	Technion-Israel Institute of Technology, Department of Chemical Engineering, Haifa, Israel
1993	(June)	Pomini, Milano, Italy
1993	(May)	Rohm & Haas, Research Laboratories, Bristol, Pennsylvania
1993	(April)	Dow Europe, Terneuzen, The Netherlands
1993	(March)	University of Akron, International Symposium on Internal Mixers, Akron, Ohio
1993	(January)	Dow Chemical Company, Midland, Michigan
1993	(January)	DuPont Experimental Station, Wilmington, DE
1992	(September)	Rhone-Poulenc Research Center, Lyon, France
1992	(August)	Kerr McGee Corporation, Oklahoma City, OK
1992	(June)	Cabot Corporation, Billerica, Massachusetts

1991	(November)	DuPont Experimental Station, Wilmington, DE
1991	(October)	Bridgestone/Firestone, Akron, Ohio
1991	(September)	Ferro Corporation, Independence, Ohio
1991	(September)	Pomini, Milano, Italy
1991	(August)	Goodyear Tire and Rubber Company, Akron, OH
1991	(March)	Polymer Processing Institute, Stevens Institute of Technology, Secaucus, New Jersey (Short Course)
1990	(June)	Polymer Processing Institute, Stevens Institute of Technology, Teaneck, New Jersey (Short Course)
1990	(May)	Dow Chemical Company, Midland, Michigan
1990	(May)	ACS Akron Polymer Conference
1990	(May)	Kerr-McGee Corporation, Oklahoma City, OK
1990	(January)	B. F. Goodrich, Avon Lake, Ohio
1989	(June)	B. F. Goodrich, Brecksville, Ohio
1989	(April)	Mitsui Toatsu Chemicals, Yokohama, Japan
1989	(January)	Department of Mechanical Engineering, Technion-Israel Institute of Technology, Haifa, Israel
1988	(December)	Department of Chemical Engineering, Technion-Israel Institute of Technology, Haifa, Israel
1988	(December)	The Goodyear Tire and Rubber Company, Akron, Ohio
1988	(October)	International Seminar on Elastomers, University of Akron, Akron, Ohio
1988	(October)	Department of Chemistry, Queen's University, Kingston, Canada
1988	(May)	Department of Chemical Engineering, University of Minnesota, Minneapolis, Minnesota

1988	(March)	Akron Polymer Engineering Center, University of Akron, Akron, Ohio
1987	(November)	Borg Warner Chemicals, Parkersburg,West Virginia
1986	(January)	Shell Development Company, Westhollow Research Center, Houston, Texas
1986	(June)	Dow Chemical, Granville Research Center, Granville, Ohio
1985	(December)	NASA-Lewis Research Center, Cleveland, Ohio
1984	(January)	Department of Macromolecular Science, Case Western Reserve University, Cleveland, Ohio
1982	(August)	Farrell Company Division, USM Corporation, Ansonia, Connecticut
1982	(August)	Department of Chemical Engineering,Stevens Institute of Technology, Hoboken, New Jersey

Short Courses

1999	Case Western Reserve University, Cleveland, Ohio	Short Course on Fundamentals and New Developments in Processing of Multi-phase Systems
1993	University of Akron, Akron, Ohio	EPIC Short Course on Blending and Compounding Polymer Systems
1993	Cabot Corporation Billerica, Massachusetts	Short Course on Polymer Processing
1992	Polymer Processing Institute Stevens Institute of Technology, Meadowlands, New Jersey	Short Course on Mixing
1992	University of Akron, Akron, Ohio	EPIC Short Course on Blending and Compounding Polymer Systems
1991	Polymer Processing Institute Stevens Institute of Technology, Secaucus, New Jersey	Short Course on Mixing

1991 University of Akron, EPIC Short Course on Blending and Compounding Polymer Systems, Akron, Ohio

Conference Presentations

1. O. Kravchenko, X. Qian, D. Pedrazzoli, I. Manas-Zloczower, 2017, "Effect of interfacial adhesion of polycarbonate film on Mode I and Mode II fracture toughness of interleaved epoxy composites", American Society for Composites, Purdue University, October 2017.

2. G. Gedler, B. Zhao, S. J. Rowan, I. Manas-Zloczower, D. L. Feke, 2017, "Role of calcium chloride in promoting water-responsive behavior in elastomeric foams", ACS National Meeting, Washington, DC, August 2017.

3. Vahab Solouki Bonab, Vahid Karimkhani, Dian Yuan, Ammar Patel, Liang Yue, Ica Manas-Zloczower, 2017, "Ultra-fast self-healing polyurethane networks", ACS National Meeting, Washington, DC, August 2017.

4. Dian Yuan, Vahab Solouki Bonab, Richard A. Gross, Ica Manas-Zloczower, 2017 "Bio-based epoxy-TPU system for self-healing coating applications", ACS National Meeting, Washington, DC, August 2017.

5. Ammar Patel, Oleksandr Kravchenko, Liang Yue, Dian Yuan, Richard Gross, Ica Manas-Zloczower, 2017, "Toughened biobased epoxy nanocomposites as structural adhesives", ACS National Meeting, Washington, DC, August 2017.

6. Liang Yue, Fei Liu, Richard Gross, Ica Manas-Zloczower, 2017, "Bacterial cellulose nanofiber mats as reinforcement for epoxy-anhydride systems", ACS National Meeting, Washington, DC, August 2017.

7. Vahid Karimkhani, Kristen Rohm, Donald Feke, Stuart J. Rowan, Ica Manas-Zloczower, 2017, "Morphology and Mechanical Properties of Poly(HIPE) Nanocomposites Containing Cellulose Nanocrystals", ACS National Meeting, Washington, DC, August 2017.

8. Oleksandr G. Kravchenko, G. Gedler, D. L. Feke, Ica Manas-Zloczower, 2017, "Micromechanical modeling of the compressive response of poly(HIPE) foams", ACS National Meeting, Washington, DC, August 2017.

9. Kristen Rohm, Vahid Karimkhani, Donald Feke, Ica Manas-Zloczower, 2017, "Effect of surfactant system on polyHIPE morphology and mechanical properties", ACS National Meeting, Washington, DC, August 2017.

10. Vahab Solouki, Ica Manas-Zloczower, 2016, "Enhancing elastomeric performance and application window for thermoplastic polyurethanes (TPU) by incorporation of carbon nanotubes (CNTs)", ACS-Rubber Division Meeting, Cleveland, OH, April 2016.

11. O. Maxian, D. Pedrazzoli, I. Manas-Zloczower, 2016, “Modeling the Percolation Behavior of Bulk and Porous Systems Incorporating Carbon Nanofillers”, ACS National Meeting, Philadelphia, August 2016.

12. A. Patel, A. Maiorana, L. Yue, R. Gross and I. Manas-Zloczower, 2016, “Effect of CNT functionalization on the curing kinetics of bio epoxies”, ACS National Meeting, Philadelphia, August 2016.

13. A. Patel, A. Maiorana, L. Yue, R. Gross and I. Manas-Zloczower, 2016, “Curing Kinetics of Bio-Based Epoxies for Tailored Applications”, ACS National Meeting, Philadelphia, August 2016.

14. V. Solouki Bonab and I. Manas-Zloczower, 2016, “Revisiting Thermoplastic PolyUrethane (TPU): From Composition to Morphology and Properties”, ACS National Meeting, Philadelphia, August 2016.

15. L. Yue, A. Maiorana, A. Patel, R. Gross, I. Manas-Zloczower, 2016, “Processability and Mechanical Properties of Biobased Epoxy Resin Systems for Wind Turbine Blades”, PPS-32 International Conference, Lyon, France, July 25-30, 2016.

16. D. Yuan, D. Pedrazzoli and I. Manas-Zloczower, 2015, “Optimization of Melt Compounding Processing Conditions of Thermoplastic Polyurethane Nanocomposites”, ACS Rubber Division Meeting, Cleveland, OH, October 12-15, 2015.

17. D. Pedrazzoli and I. Manas-Zloczower, 2015, “Effect of Carbon Nanotubes and Cellulose Nanocrystals on the Phase Separation and Morphology in Thermoplastic Polyurethane Nanocomposites”, ACS Rubber Division Meeting, Cleveland, OH, October 12-15, 2015.

18. V. Solouki Bonab and I. Manas-Zloczower, 2015, “Tuning TPU properties by changing the hard segment content”, ACS Rubber Division Meeting, Cleveland, OH, October 12-15, 2015.

19. D. Yuan, D. Pedrazzoli and I. Manas-Zloczower, 2015, “Synergistic Effects of Carbon Nanotubes and Graphene in Thermoplastic Polyurethane Nanocomposites”, PPS Conference, Graz, Austria, September 21-25, 2015.

20. Q. Meng and I. Manas-Zloczower, 2014, “Tough films made of cellulose nanowhiskers and carbon nanotubes with tailorable electrical conductivity”, ACS National Meeting, San Francisco, CA, August 14, 2014.

21. I. Manas-Zloczower, 2014, “Can cellulose nanowhiskers replace carbon nanotubes in advanced composite materials?”, ACS National Meeting, San Francisco, CA, August 14, 2014.

22. L. Yue, I. Manas-Zloczower, 2014,” Tough films made of cellulose nanowhiskers and carbon nanotubes with tailorable electrical conductivity”, ACS National Meeting, San Francisco, CA, August 14, 2014.

23. L. Yue, I. Manas-Zloczower, 2014, "Epoxy Composites with Hybrid Carbon Fillers– Dispersion and synergy effects", PPS-30 International Conference, Cleveland, June 8-12, 2014.

24. Q. Meng and I. Manas-Zloczower, 2014, "CNW/CNT filler network systems – properties and synergistic behavior", PPS-30 International Conference, Cleveland, June 8-12, 2014.

25. C. Bezik, R. Foudazi, D. L. Feke, S. J. Rowan and I. Manas-Zloczower, 2014, "Fabrication and Characterization of Poly(High Internal Phase Emulsion) Fibers", PPS-30 International Conference, Cleveland, June 8-12, 2014.

26. T. Powell, G. Pircheraghi, I. Manas-Zloczower, 2014, "Effect of ultrasonication on carbon nanotube dispersion in polyol", PPS-30 International Conference, Cleveland, June 8-12, 2014.

27. G. Pircheraghi, M. P. Mallamaci, I. Manas-Zloczower, 2014, "Carbon nanotube/polyurethane nanocomposites by melt mixing", PPS-30 International Conference, Cleveland, June 8-12, 2014.

28. G. Pircheraghi, I. Manas-Zloczower, 2014, "Rheological assessment of CNT dispersion in polyol systems", PPS-30 International Conference, Cleveland, June 8-12, 2014.

29. M. R. Loos and I. Manas-Zloczower, 2013, "Micromechanical Models for Polymer Nanocomposites", ACS, PMSE, New Orleans, LA, April 9, 2013.

30. R. Foudazi, P. Gokun, S. J. Rowan, D. L. Feke, I. Manas-Zloczower, 2013, "Chemorheology of Poly(High Internal Phase Emulsions)", AIChE, San Francisco, November 3-8.

31. Y.Y. Law, D.L. Feke and I. Manas-Zloczower, 2012, "Thermogravimetric Analysis of the Kinetics of the Reaction of Alkoxysilane with Silica", 182nd Technical Meeting & Educational Symposium of the Rubber Division of the American Chemical Society, Cincinnati, Ohio, October 10, 2012.

32. Y.Y. Law, D.L. Feke and I. Manas-Zloczower, 2012, "Thermogravimetric Analysis of the Kinetics of the Reaction of Alkoxysilane with Silica", American Institute of Chemical Engineers Annual Meeting Pittsburgh, Pennsylvania, October 29, 2012

33. R. Foudazi, D.L. Feke, S.J. Rowan and I. Manas-Zloczower, 2012, "Chemorheology and Microstructure Studies for Poly-HIPE Systems", The XVIth International Congress on Rheology, Lisbon, Portugal, August 5-10, 2012.

34. M. Loos, J. Yang, D.L. Feke and I. Manas-Zloczower, 2012, "Selecting Dispersing Agents for Thermoset/Carbon Nanotube Masterbatches", PPS Americas Conference, Niagara Falls, Canada, May 20-23, 2012.

35. R. Foudazi, P. Gokun, S.J. Rowan, D.L. Feke, I. Manas-Zloczower, "Chemorheology and Microstructure Studies for Poly-HIPE Systems", The XVIth International Congress on Rheology, August 5-10, 2012 - Lisbon, Portugal.

36. M. Loos, J. Yang, D.L. Feke and I. Manas-Zloczower, 2011, "Epoxy/Carbon Nanotubes Composites for Wind Turbine Blades", ANTEC 2011, Boston, May 1-5.

37. M. Loos, J. Yang, D.L. Feke and I. Manas-Zloczower, 2010, "Polyurethane/Carbon Nanotubes Composites Using Block Copolymers as Dispersing Agents", PPS Regional Meeting, Istanbul, Turkey, October 20-23.

38. L. Bava, D.L. Feke, I. Manas-Zloczower and S. J. Rowan, 2007, "Temperature Controlled Aggregation And Dispersion Behavior Of Silica Clusters", AIChE Annual Meeting, Salt Lake City, Utah, November 4-9.

39. L. Bava, D.L. Feke, I. Manas-Zloczower and S. J. Rowan, 2007, "Temperature Controlled Dispersion of Poly(N-Isopropyl Acrylamide) Treated Silica Clusters", Rubber Expo and International Rubber Conference, Cleveland, OH, October 16-18.

40. M. Kaufman, M. Camesasca and I. Manas-Zloczower, 2007, "Applications of Statistical Physics to Mixing in Microchannels: Entropy and Multifractals", NATO-ASI Conference, Sinaia, Romania, June 4-15.

41. I. Manas-Zloczower, M. Camesasca and M. Kaufman, 2007, "Fractal Mixers", PPS-23, Annual meeting, Salvador, Brazil, May 27-31.

42. L. Bava, D.L. Feke, I. Manas-Zloczower and S. J. Rowan, 2006, "Responsive Binders for Controlling Dispersion Behavior of Fine Particle Clusters", AIChE Annual Meeting, San Francisco, CA, November 12-17.

43. M. Camesasca, I. Manas-Zloczower, M. Kaufman, 2006, "Fractal Patterning for Mixing Enhancement in Microchannels" AIChE Annual Meeting, San Francisco, CA, November 12-17.

44. M. Kaufman, M. Camesasca, I. Manas-Zloczower, 2006, "Microchannel Mixing, Entropy and Multifractals" NSTI Nanotech, Boston, MA, May 7-11.

45. N. Domingues, M. Camesasca, M. Kaufman, I.Manas-Zloczower, António Gaspar-Cunha, José António Covas, 2006 "Modeling Agglomerate Dispersion in Single Screw Extruders" ANTEC-2006, Charlotte, NC, May 7-11.

46. L. Bava, D. L. Feke, I. Manas-Zloczower and S. Rowan, 2005, "Controlling the Processing Behavior of Silica Agglomerates Using a Thermo-Responsive Binder", AICHE meeting, Cincinnati, OH, November 6-10.

47. M. Camesasca, I. Manas-Zloczower and M. Kaufman, 2005, “Microsystems: Measuring Mixing Efficiency Using Statistical Entropy”, AICHE meeting, Cincinnati, OH, November 6-10.

48. A. Scurati, D.L. Feke and I. Manas-Zloczower, 2005, “Kinetics of Dispersion of Particle Clusters in Steady and Time-Varying Simple Shear Flows”, 7th World Congress of Chemical Engineers, Glasgow, Scotland, July 10-14.

49. M. Camesasca, M. Kaufman and I. Manas-Zloczower, 2005, “Entropic Analysis of Laminar Mixing in Single Screw Extruders”, PPS-21, Annual meeting, Leipzig, Germany, June 19-23.

50. K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2005, “Color Mixing in Single Screw Extruder: Simulation and Experimental Validation”, ANTEC-2005, Boston, MA, May 1-5.

51. I. Manas-Zloczower, M. Kaufman, K. Alemaskin and M. Camesasca, 2005, “Color Mixing in Extrusion: Simulations and Experimental Validation”, The 2005 NSF Design, Service and Manufacturing Grantees Research Conference, Scottsdale, AZ, January 3-6.

52. J.M. Knoll, I. Manas-Zloczower, and D.L. Feke, 2004, "Understanding the Dispersion of Conductive Fillers," AIChE Annual Meeting, San Antonio, November 6-11.

53. M. Fanelli, D. L. Feke and I. Manas-Zloczower, 2004, “Prediction of the Dynamics of Dispersion of Particle Clusters in the Nano-Scale”, AIChE 2004 Annual Meeting Austin ,TX, November 10.

54. P. Gopalkrishnan, I. Manas-Zloczower and D. L. Feke, 2004, “Unified Theory of the Fundamental Mechanisms of Agglomerate Dispersion”, PPS Annual meeting, Akron, OH, June 20-24.

55. M. Fanelli, D.L. Feke and I. Manas-Zloczower, 2004, “Prediction of the Dispersion of Particle Clusters in the Nano-scale to the Micro-scale Size Range”, PPS Annual meeting, Akron, OH, June 20-24.

56. M. Camesasca, I. Manas-Zloczower and M. Kaufman, 2004, “Statistical Entropy in Mixing Analysis Applied to Polymer Processing”, PPS Annual meeting, Akron, OH, June 20-24.

57. K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2004, “Entropic Mixing Characterization in a Single Screw Extruder”, PPS Annual meeting, Akron, OH, June 20-24.

58. K. Alemaskin, M. Camesasca, I. Manas-Zloczower, M. Kaufman, E.K. Kim, M. A. Spalding, W. A. Trumbull and R. D. Swain, 2004, “Entropic Mixing Characterization in A Single Screw Extruder”, ANTEC-2004, Chicago, Ill, May 16-21.

59. M. Camesasca, K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2004, “Entropic Measures of Mixing Tailored for various Applications”, The 2004 NSF Design, Service and

Manufacturing Grantees Research Conference, Dallas, TX, January 5-8.

60. J. Boyle, I. Manas-Zloczower and D. L. Feke, 2003, "Analysis of Cohesive and Adhesive Failure Mechanisms in Agglomerate Dispersion", AICHE meeting, San Francisco, CA, November 16-21.

61. P. Gopalkrishnan, I. Manas-Zloczower, and D.L. Feke, 2003, "Predicting failure modes in agglomerates: adhesive or cohesive, from a fundamental analytical model to estimate binder-induced interactions", AICHE meeting, San Francisco, CA, November 16-21.

62. J. Boyle, D. L. Feke and I. Manas-Zloczower, 2003, "Mechanisms of Adhesive and Cohesive Failure in Agglomerate Dispersion", PPS Annual meeting, Melbourne, Australia, July 7-10.

63. K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2003, "Simultaneous Characterization of Dispersive and Distributive mixing in a Single Screw Extruder", ANTEC-2003, Nashville, TN, May 4-8.

64. M. Kaufman, W. Wang and I. Manas-Zloczower, 2003, "Dynamics of Mixing in Polymer Processing", Annual APS meeting, Austin, TX, March 3-7.

65. W. Wang, I. Manas-Zloczower, and M. Kaufman, 2003, "Characterization of Dynamics of Mixing in Polymer Processing and its Relationship to Chaos", The 2003 NSF Design, Service and Manufacturing Grantees Research Conference, Birmingham, AL, January 6-9.

66. P. Gopalkrishnan, D. L. Feke and I. Manas-Zloczower, 2002, "Analysis of Liquid Pendular Bridges: Experiment and Modeling", AICHE meeting, Indianapolis, IN, November 3-8.

67. K. Alemaskin, I. Manas-Zloczower and M. Kaufman, 2002, "New complex entropic index for dispersive and distributive mixing characterization in continuous polymer processing equipment", AICHE meeting, Indianapolis, IN, November 3-8.

68. A. Scurati, I. Manas-Zloczower and D. L. Feke, 2002, "Influence of Powder Surface Treatment and Flow Geometry on the Dispersion Behavior of Silica into Polymeric Materials", PPS-18 Annual Meeting, Guimaraes, Portugal, June 16-20.

69. W. Wang, I. Manas-Zloczower and M. Kaufman, 2002, "Chaotic Features of Flow in Single Screw Extruders- Relevance to Distributive Mixing", ANTEC–2002, San Francisco, CA, May 5-9.

70. A. Scurati , D. L. Feke and I. Manas-Zloczower , 2002, "Model for Erosion Kinetics in Simple Shear Flows", ACS-Rubber Division Meeting, Savannah, GA, April 29-May 1.

71. W. Wang, I. Manas-Zloczower and M. Kaufman, 2002, "Chaotic Mixing in Polymer Processing", APS Meeting, Indianapolis, Indiana, March 18-22.

72. W. Wang and I. Manas-Zloczower, 2002, "Analysis of Distributive Mixing in Terms of Renyi Entropies in Continuous Polymer Processing Equipment", The 2002 NSF Design, Service and Manufacturing Grantees Research Conference, San Juan, Puerto Rico, January 7-10.

73. W. Wang, I. Manas-Zloczower and M. Kaufman, 2001, "A Study of Non-Linear Dynamics in Polymer Processing Equipment", AICHE Annual Meeting, Reno, Nevada, November 5-9.

74. J. Boyle, I. Manas-Zloczower and D. L. Feke, 2001, "Effect of Fluid Infiltration on the Dispersion Behavior of Fumed Silica Agglomerates", ACS Rubber Division Meeting, Cleveland, OH October 16-19.

75. A. Scurati, I. Manas-Zloczower and D. L. Feke, 2001, "Influence of Powder Surface Treatment on the Dispersibility of Precipitated Silica", ACS Rubber Division Meeting, Cleveland, OH, October 16-19.

76. J. Boyle, I. Manas-Zloczower and D. L. Feke, 2001, "Effect of Fluid Infiltration on the Dispersion Behavior of Powder Agglomerates", 17th Annual PPS Meeting, Montreal, Canada, May 21-24.

77. W. Wang and I. Manas-Zloczower, 2001, "Dispersive and Distributive Mixing Characterization in Extrusion Equipment", ANTEC, Dallas, TX, May 5-10.

78. W. Wang, I. Manas-Zloczower and M. Kaufman, 2001, "Characterization of Distributive Mixing in Polymer Processing Equipment", APS meeting, Seattle, WA, March 12-16.

79. W. Wang and I. Manas-Zloczower, 2001, "Analysis of Dispersive and Distributive Mixing in Terms of Minor Component Size and Spatial Distributions in Continuous Polymer Processing Equipment", The 2001 NSF Design, Service and Manufacturing Grantees Research Conference, Tampa, FL, January 7-10.

80. A. Scurati, D. L. Feke and I. Manas-Zloczower, 2000, "Influence of Morphology and Packing Density on the Permeability of Fine Particle Agglomerates", AICHE meeting, Los Angeles, CA, Nov. 13-17.

81. W. Wang and I. Manas-Zloczower, 2000, "Exploration of Efficient Methods to Generate Finite Element Meshes for Materials Processing", Fidap Users Group Meeting, Davenport, MA, June 12-16.

82. N. Nithi-Uthai, S.-Q. Wang and I. Manas-Zloczower, 2000, "Numerical Studies of Die Swell for Polymer Melts of Various MW and MWD", Polyflow Users Group Meeting, Davenport, MA, June 12-16.

83. D. Nichetti and I.Manas-Zloczower, 1998, “Influence of Molecular Parameters on Material Processability in Extrusion Processes”, AICHE Annual Meeting, Miami Beach, Florida, November 15-20.

84. P. Levresse, D.L.Feke and I.Manas-Zloczower, 1998, “Behavior of Permeable Agglomerates in Prototype Flow Fields – Relevance to Agglomerate Dispersion”, PPS North American Meeting, Toronto, Canada, August 17-19.

85. C. H Yao and I. Manas-Zloczower, 1998,” Influence of Design on Mixing Performance in an Axial Discharge Continuous Mixer-LCMAX 40”, SPE-ANTEC, Atlanta, Georgia, April 26-30.

86. H. Cheng and I. Manas-Zloczower, 1997, “Distributive Mixing in Conveying Elements of Corotating Twin Screw Extruders”, AICHE Annual Meeting, Los Angeles, California, November 16-21.

87. H. Yamada, D. L. Feke and I. Manas-Zloczower, 1997, “Measurement and Analysis of the Infiltration of Polymeric Liquids into Carbon Black Agglomerates”, AICHE Annual Meeting, Los Angeles, California, November 16-21.

88. D. Nichetti and I. Manas-Zloczower, 1997, “Viscosity Model for Polydisperse Polymers” Society of Rheology Annual Meeting, Columbus, OH, October 20-24.

89. K. J. Ang, S. Q. Wang and I. Manas-Zloczower, 1997, “Extrudate Swell Simulations - Effect of Wall Slip”, Society of Rheology Annual Meeting, Columbus, OH, October 20-24.

90. H. Yamada, D. L. Feke and I. Manas-Zloczower, 1997, “Influence of Matrix Viscosity and Interfacial Properties on Particle Clusters Dispersibility”, PPS-13, Secaucus, NJ, June 10-13.

91. I. Manas-Zloczower and H. Cheng, 1997, “Influence of Design on Mixing Efficiency in the Kneading Disc Region of Corotating Twin Screw Extruders”, SPE-ANTEC, Toronto, Canada, April 27-May 2.

92. P. Levresse, D. L. Feke and I. Manas-Zloczower, 1996, “ Analysis of Formation of Bound Silicone Rubber on Silica”, AICHE Annual Meeting, Chicago, IL, November 10-15.

93. A. L. Raab, D. L. Feke and I. Manas-Zloczower, 1996, “Influence of Aggregate Structure and Interfacial Chemistry on the Apparent Permeability of Carbon Black Clusters”, AICHE Annual Meeting, Chicago, IL, November 10-15.

94. H. F. Cheng, T. Li and I. Manas-Zloczower, 1996, “Chaotic Features of Flow in Single and Twin Screw Extruders-Relevance to Distributive Mixing Efficiency”, XII th International Congress on Rheology, Quebec City, Canada, August 18-23.

95. H. Yamada, D. L. Feke and I. Manas-Zloczower, 1995, “Kinetics of Dispersionof Drainable Carbon Black Agglomerates in Simple Shear Flow”, AlChE Annual Meeting, Miami Beach, Florida, November 12-17.

96. F. Bohin, I. Manas-Zloczower and D. L. Feke, 1995, “Kinetics of Dispersion for Silica Agglomerates in Silicone Polymers”, AlChE Annual Meeting, Miami Beach, Florida, November 12-17.

97. H. F. Cheng and I. Manas-Zloczower, 1995, “Effect of Rheological Properties on Distributive Mixing Efficiency in Single and Twin Screw Extruders”, PPS Regional Meeting for the Americas, Akron, OH, November 14-16.

98. C. H. Yao and I. Manas-Zloczower, 1995, “Influence of Chamber Design on Mixing Efficiency in a Variable Intermeshing Clearance Mixer”, PPS Regional Meeting for the Americas, Akron, OH, November 14-16.

99. H. F. Cheng and I. Manas-Zloczower, 1995, “Study of Mixing in Single Screw Extruders Using Poincare Sections and Residence Time Distribution Functions”, PPS European Meeting, Stuttgart, Germany, September 26-28.

100. C. Q. Song, M. H. Litt and I. Manas-Zloczower, 1995, “Preparation and Characterization on HPC Hydrophilic Films”, 210th ACS National Meeting, Chicago, Illinois, August 20-24.

101. C. Q. Song, M. H. Litt and I. Manas-Zloczower, 1995, “A Study of Permselectivity of Hydrophilic Membranes Crosslinked Under Various Conditions”, 210th ACS National Meeting, Chicago, Illinois, August 20-24.

102. T. Li and I. Manas-Zloczower, 1995, “Flow Field Analysis of a Multi Cut Transfermix”, SPE-ANTEC, Boston, Massachusetts, May 7-11.

103. I. Manas-Zloczower, 1995, “Effect of the Surfactant Treatment on the Dispersibility of Titania into Polymeric Materials: Filler-Polymer Interactions”, 38th Annual Technical Symposium of the Cleveland Society for Coatings Technology, Akron, Ohio, May 4.

104. H. Yamada, I. Manas-Zloczower and D. L. Feke, 1995, “Characterization of Carbon Black Agglomerate Structure and Its Relation to Dispersibility”, PPS Meeting, Seoul, Korea, March 27-30.

105. T. Li and I. Manas-Zloczower, 1994, "A Study of Distributive Mixing in Counterrotating Twin Screw Extruders", European Rheology Conference, Seville, Spain, September 4-9.

106. F. Bohin, I. Manas-Zloczower and D. L. Feke, 1994, "Characterization of the Dispersion of Silica Agglomerates in Silicone Polymers in Simple Shear Flows", PPS European Regional Meeting, Strasbourg, France, August 29-31.

107. I. Manas-Zloczower, 1994, "How to Make Better Composites: A Study of Mixing Efficiency in Various Equipment", 35th IUPAC, Akron, Ohio, July 11-15.

108. S. Gupta, D. L. Feke and I. Manas-Zloczower, 1994, "Separation of Polymers in Waste Streams Using Ultrasonic Standing Wave Fields", American Filtration Society Meeting, Chicago, May 1994.

109. C. H. Yao and I. Manas-Zloczower, 1994, "Study of Mixing Efficiency in a Two Roll Mill", PPS Meeting, Akron, Ohio, April 3-7.

110. M. Arellano, I. Manas-Zloczower and D. L. Feke, 1994, "Dispersion of Surfactant Treated TiO_2 Powders into Polymeric Materials", PPS Meeting, Akron,Ohio, April 3-7.

111. T. Li and I. Manas-Zloczower, 1994, "Mixing Performance Analysis for a Multi Cut Transfermix", PPS Meeting, Akron, Ohio, April 3-7.

112. M. Arellano, I. Manas-Zloczower and D. L. Feke, 1993, "Effects of Surfactant Treatment on the Dispersibility of TiO_2 Agglomerates", AlChE Meeting, Saint Louis, Missouri, November 1-5.

113. C. Wang and I. Manas-Zloczower, 1993, "Evaluation of a Cavity Transfer Mixer for Polymer Mixing", PPS Regional Meeting for the Americas, Morgantown, West Virginia, August 8-11.

114. T. Li and I. Manas-Zloczower, 1993, "Mixing Performance Analysis in Counter-rotating Twin Screw Extruders", PPS Regional Meeting for the Americas, Morgantown, West Virginia, August 8-11.

115. A. Drakopoulou, D.L. Feke and I. Manas-Zloczower, 1993, “Aggregate Structure Effect on the Agglomerate Morphology and Cohesivity”, ACS, Rubber Division Meeting, Denver, Colorado, May 18-21.

116. T. Wong and I. Manas-Zloczower, 1993, “Two Dimensional Dynamic Study of Dispersive Mixing in a Banbury Mixer”, SPE-ANTEC, New Orleans, Louisiana, May 9-13.

117. Y. J. Lee, I. Manas-Zloczower and D. L. Feke, 1993, “Studies of TiO_2 Agglomerate Dispersion in High Viscosity Media and its Effect on Properties of Compounds” Polymer Processing Society Meeting, Manchester, England, April 5-8.

118. Y.J. Lee, D.L. Feke and I. Manas-Zloczower, 1992, “The Influence of Powder Interface and Cluster Structure on the Dispersion of Surface Treated TiO_2”, AlChE Meeting, Miami Beach, Florida, November 2-6.

119. T. Li and I. Manas-Zloczower, 1992, “Flow Field Analysis of an Intermeshing Counterrotating Twin Screw Extruder”, AIChE Meeting, Miami Beach, Florida, November 2-6.

120. C. C. Wang and I. Manas-Zloczower, 1992, “Hydrodynamic Analysis of the Cavity Transfer Mixer”, Polymer Processing Society Meeting, Prague, Czechoslovakia, September 21-24.

121. H. H. Yang and I. Manas-Zloczower, 1992, "Hydrodynamic Analysis of a Banbury Mixer- 3-D Flow Simulations", Xlth International Congress on Rheology, Brussels, Belgium, August 17-21.

122. T. Wong and I. Manas-Zloczower, 1992, "Numerical Studies of the Flow Field in Partially Filled Mixing Equipment", SPE-ANTEC, Detroit, Michigan, May 3-7.

123. Y. J. Lee, D. L. Feke and I. Manas-Zloczower, 1992, "Interfacial Characteristics of Treated Titanium Dioxide Powders",SPE-ANTEC, Detroit, Michigan, May 3-7.

124. S.W. Horwatt, I. Manas-Zloczower and D. L. Feke, 1992, "Dynamic Behavior of Heterogeneous Agglomerates at Supercritical Stresses", Polymer Processing Society Meeting, New Delhi, India, March 23-27.

125. Y.J. Lee, D. L. Feke and I. Manas-Zloczower, 1991, "Dispersion and Stability Windows for the Processing of Titanium Dioxide Suspensions", AlChE Meeting, Los Angeles, California, November 4-8.

126. S.W. Horwatt, D. L. Feke and I. Manas-Zloczower, 1991, "Simulation of the Breakup of Dense Agglomerates in Simple Shear Flows", ACS Rubber Division Meeting, Detroit, Michigan, Oct. 8-11.

127. H. Ng, I. Manas-Zloczower and M. Shmorhun, 1991, "Rheo-Kinetic Studies for a DCPD-RIM System", Polymer Processing Society Meeting, Palermo, Italy, September 15-18.

128. M. Shmorhun, I. Manas-Zloczower and H. Ng, 1991, "Bulk Polymerization Kinetics of Telene Liquid Engineered Resin Systems", 9th International Symposium on Metathesis, Collegeville, Pennsylvania, July 21-25.

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152. I. Manas-Zloczower, J. W. Blake and C. W. Macosko, 1986, "Space-Time Distribution for Filling a Mold", Polymer Processing Society Meeting, Montreal, Canada, April 1-4.

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