| chapter | page | line | correction |
| :---: | :---: | :---: | :---: |
| 1 | 7 |  | In Eq. 1.1-5, replace subscript " 10 " on first " H " with subscript " 12 " and replace subscript " 5 " on second " C " with " 6 " |
| 3 | 48 |  | In Eq. 3.5-8, remove subscript " i " from the "G" symbol |
| 3 | 51 |  | In the second line of Eq. 3.5-26, replace " $\mathrm{C}_{6} \mathrm{H}_{11} \mathrm{O}_{6} \mathrm{PO}_{4}^{-2}$ " with $" \mathrm{C}_{6} \mathrm{H}_{11} \mathrm{O}_{6} \mathrm{PO}_{3}^{-2}$ " Also replace " $\mathrm{H}\left(\mathrm{C}_{5} \mathrm{H}_{10} \mathrm{O}_{5}\right)_{\mathrm{n}} \mathrm{OH}$ " with $" \mathrm{H}_{\left(\mathrm{C}_{6} \mathrm{H}_{10} \mathrm{O}_{5}\right)_{\mathrm{n}} \mathrm{OH} \text { " }}$ |
| 5 | 93 |  | In first line of Eq. 5.5-12, replace $" \kappa_{\mathrm{p} 2}=\mathrm{C}_{\mathrm{Hb}_{4} \mathrm{O}_{4}} / \mathrm{C}_{\mathrm{Hb}_{4} \mathrm{O}_{2}} \mathrm{p}_{\mathrm{O}_{2}}$ " with $" \mathrm{~K}_{\mathrm{p} 1}=\mathrm{C}_{\mathrm{Hb}_{4} \mathrm{O}_{2}} / \mathrm{C}_{\mathrm{Hb}_{4}} \mathrm{p}_{\mathrm{O}_{2}}$ " |
| 5 | 97 |  | In Eq. 5.5-27, replace " $=\hat{\mathrm{C}}_{\mathrm{HCO}_{3}^{-}}^{\text {plasma }} / \mathrm{c}_{\mathrm{G}}^{\mathrm{o}}="$ with $"=\mathrm{C}_{\mathrm{HCO}_{3}^{-}}^{\text {plasa }} / \mathrm{c}_{\mathrm{G}}^{\mathrm{o}}=$ " |
| 5 | 98 |  | The units on Eq. $5.5-35$ should be " ml (STP)/min" |
| 6 | 110 |  | Delete " $=0$ " from the right side of Eq. 6.2-5 |
| 6 | 117 |  | In Eq. 6.4-9, replace " $\mathrm{x}_{\mathrm{s}}$ " with " $x_{\mathrm{ca}}$ " |
| 7 | 134 |  | In table 7.3-3, replace " $\mathrm{A}_{2} \times 10^{4 \prime \prime}$ heading of fourth column with " $\mathrm{A}_{3} \times 10^{4}$ " |
| 7 | 143 | 11,13 | Replace the five occurrences of " $\mathrm{C}_{\mathrm{s}}^{\mathrm{pa}}$ " with " $\mathrm{C}_{\mathrm{s}}^{\mathrm{p}}$ " |
| 7 | 144 |  | Delete the " $\frac{1}{\varepsilon}$ " from Eq. 7.5-1a |
| 7 | 145 |  | $\text { In Eq. } 7.5-3 \text {, replace } "=\frac{\mathrm{D}_{\mathrm{s}}^{\infty}}{\mathrm{h}} \exp \ldots " \text { with } "=\frac{\varepsilon \mathcal{D}_{\mathrm{s}}^{\infty}}{\mathrm{h}} \exp \ldots "$ |
| 7 | 148 |  | In left panel of figure 7.5-4, replace " $\mathrm{a}_{2} / \mathrm{a}_{1}$ " with " $\mathrm{a}_{1} / \mathrm{a}_{2}$ " |
| 7 | 150 | 5 | Replace " $\left(\alpha_{\mathrm{O}_{2}}^{\mathrm{d}} \mathrm{D}_{\mathrm{so}}^{\mathrm{d}} / \alpha_{\mathrm{O}_{2}}^{\mathrm{c}} \mathrm{D}_{\mathrm{s}}^{\mathrm{c}}\right)$ " with " $\left(\alpha_{\mathrm{O}_{2}}^{\mathrm{d}} \mathcal{D}_{\mathrm{O}_{2}}^{\mathrm{d}} / \alpha_{\mathrm{O}_{2}}^{\mathrm{c}} \mathcal{D}_{\mathrm{O}_{2}}^{\mathrm{c}}\right)$ " |
| 8 | 165 |  | Replace figure 8.4-2 with the corrected version shown below: |
| 9 | 186 |  | In Eq. 9.2-4, replace " $\mathrm{N}_{\mathrm{s}, \mathrm{Z}}$ " with " $\mathrm{N}_{\mathrm{s}, \mathrm{y}}$ " |
| 10 | 213 |  | In Eq. 10.2-9, replace " $\mathrm{C}_{\mathrm{s}}$ " with " $\mathrm{C}_{\mathrm{s}}^{\mathrm{A}}$ " |
| 10 | 218 |  | In Eq. 10.3-6b, replace " $\overline{\mathrm{C}}_{\mathrm{i}}^{\mathrm{p}}$ " with " $\overline{\mathrm{C}}_{\mathrm{i}}^{\mathrm{c}}$ " |
| 12 | 246 | 14 | Replace "Chapter 16" with "section 15.5-2" |
| 12 | 258 |  | In Eq. 12.2-10b, replace " $\mathrm{k}_{\mathrm{c}}^{\mathrm{A}}$ " with " $\mathrm{k}_{\mathrm{s}}^{\mathrm{A}}$ " and replace $" \mathrm{k}_{\mathrm{c}}^{\mathrm{B}}$ " with " $\mathrm{k}_{\mathrm{s}}^{\mathrm{B}}$ " |
| 12 | 259 |  | In Eq. 12.2-11b, replace " $\mathrm{k}_{\mathrm{c}}^{\mathrm{A}}$ " with " $\mathrm{k}_{\mathrm{s}}^{\mathrm{A}}$ " and replace $" \mathrm{k}_{\mathrm{c}}^{\mathrm{B}}$ " with " $\mathrm{k}_{\mathrm{s}}^{\mathrm{B}}$ " |
| 13 | 298 |  | Eq. 13.3-20a should read " $t=\mathrm{t} / \mathrm{t}_{\mathrm{c}}$ " |


| 13 | 298 |  | In Eq. 13.3-20c, replace " $\mathrm{r}_{\mathrm{c}}$ " with " $\mathrm{L}_{\mathrm{c}}$ " |
| :---: | :---: | :---: | :---: |
| 13 | 305 | 22 | Replace " $\delta$ is independent" with " $\delta$ that is independent" |
| 14 | 312 |  | $\text { In Eq. 14.1-32, replace " } \left.\left(\frac{0.00501}{\sqrt[3]{v / \mathrm{U}}}\right) \frac{\mathrm{y}^{3}}{\sqrt[3]{\mathrm{x}}} " \text { with " } \frac{0.00501}{\sqrt{(\mathrm{v} / \mathrm{U})^{3}}}\right) \frac{\mathrm{y}^{3}}{\sqrt{\mathrm{x}^{3}}} "$ |
| 14 | 312 |  | In Eq. 14.1-33, replace " $\left(\frac{0.0808}{\sqrt{v / U}}\right) \frac{y^{2}}{\sqrt[3]{\mathrm{x}}} "$ with " $\left(\frac{0.0808}{\sqrt{v / \mathrm{U}}}\right) \frac{\mathrm{y}^{2}}{\sqrt{\mathrm{x}^{3}}} "$ |
| 14 | 312 |  | $\text { In Eq. 14.1-33, replace " }\left(\frac{0.00188}{\sqrt[3]{\mathrm{v} / \mathrm{U}}}\right) \frac{\mathrm{y}^{4}}{\sqrt[5]{\mathrm{x}}} " \text { with } "\left(\frac{0.00188}{\sqrt{(\mathrm{v} / \mathrm{U})^{3}}}\right) \frac{\mathrm{y}^{4}}{\sqrt{\mathrm{x}^{5}}} "$ |
| 15 | 334 | 6 | Replace "based on is $\mathbf{u}$, is" with "based on $\mathbf{u}$, is" |
| 15 | 353 | 3 | Replace " $G r \gg 1$ " with " $G z \gg 1$ " |
| 16 | 360 | 2 | The y appearing in "...+y>1" should be in italics |
| 16 | 364 |  | $\text { In Eq. 16.1-28, replace " }=D a C " \text { with } "=\frac{D a}{K} C "$ |
| 16 | 378 | 9 | Replace "Also for the single-phase" by "For the single-phase" |
| 16 | 386 |  | In Eq. 16.3-28, replace " $\mathcal{D}_{\mathrm{s}}{ }^{\text {" }}$ with ${ }^{\text {- }} \mathcal{D}_{\mathrm{x}}{ }^{\text {" }}$ |
| 16 | 386 |  | In Eq. 16.3-32c, replace " $=\frac{D a^{\mathrm{s}} C}{K+C} "$ with $"=-\frac{D a^{\mathrm{s}} C}{K+C}$ |
| 17 | 395 |  | In Eq. 17.3-2, replace " $\mathrm{dC}_{\mathrm{A}}$ " with " $\mathrm{dC}_{\text {lam }}$ " |
| 17 | 395 |  | In Eq. 17.3-5, replace " $\mu_{\mathrm{i}}^{\text {rand }}$ " with " $\mu_{\mathrm{ax}}^{\text {rand }}$ " |
| 18 | 432 | 3 | Replace the argument "(t)" with "(s)" |
| 19 | 441 |  | In Eq. 19.1-10, replace " $-\frac{\ln (2)}{\mathrm{T}^{1 / 2}}$ " with " $-\frac{\ln (2)}{\mathrm{T}_{1 / 2}}$ " |
| 19 | 445 |  | In Eq. 19.1-28, replace " $\mathrm{y}_{\mathrm{E}}$ " with " $\mathrm{y}_{\mathrm{A}}\left(\mathrm{t}_{\mathrm{D}}\right)$ " |
| 19 | 447 |  | In figure 19.1-5, replace " K " with "- K " in equation for $\mathrm{N}_{\text {wall }}$. |
| 20 | 489 |  | In Eq. 20.4-21, the right side should read: " $\frac{\varepsilon^{\mathrm{P}} \beta_{2}}{1+\varepsilon^{\mathrm{P}} \beta_{2}}$ " |
| 21 | 502 |  | In Eq. 21.1-23a-f, the symbol $C_{\mathrm{e}}(t)$ represents a dimensionless time dependent variable, not a dimensionless parameter as the previous line states. |
| 21 | 508 |  | In figure 21.2-2 caption, delete phrase "Theeuwes and Yum...Springer)" |
| 21 | 522 |  | In Eq. B3-30, replace " $\phi_{\text {cell }} \mathrm{N}_{\mathrm{i}, \text { wall }}+\phi_{\text {cap }} \mathrm{N}_{\mathrm{i}, \text { wall }}$ " with " $\phi_{\text {cell }} \mathrm{N}_{\mathrm{i}, \text { wall }}^{\text {cell }}+\phi_{\text {cap }} \mathrm{N}_{\mathrm{i}, \text { wall }}^{\text {cap }}$ " |
| App B | 602 |  | On the left side of the $r$ entry in Table B4-4, place " $-\frac{u_{\theta}^{2}}{r}$ " as a fifth term in parenthesis. |
| App B | 603 |  | On the left side of the rentry in Table B4-5, place " $-\frac{u_{\theta}^{2}}{r}$ " as a fifth term in parenthesis. |
| App B | 604 |  | In table B4-9, replace " $\gamma_{\text {app }}^{2}$ " in the column heading with " $4 \gamma_{\text {app }}^{2}$ " |


| App C | 608 | 17 | In the line after Eq. C2-2, insert the phrase: "where i and j are assigned a fixed integer value between 1 and N." before "The adjoint ..." |
| :---: | :---: | :---: | :---: |
| App C | 614 |  | In fourth entry in table C4-2, replace $\frac{\left(a e^{a t}-b e^{b t}\right)}{(b-a)} "$ with $" \frac{\left(a e^{a t}-b e^{b t}\right)}{(a-b)} "$ |
| App C | 614 |  | In sixth entry in table C4-2, replace " $\sin (\omega \mathrm{t}+\phi), \cos (\omega \mathrm{t}+\phi)$ " with $" \sin (\omega \mathrm{t}+\phi), \cos (\omega \mathrm{t}+\phi)$ " |
| App C | 614 |  | In sixth entry in table C4-2, replace " $\sin (\phi)$ " with " $\sin (\phi)$ " |
| App C | 614 |  | In Eq. C5-1b, replace " $\mathrm{t}=\mathrm{t}_{0}$ " with " $\mathrm{t}<\mathrm{t}_{0}$ " |
| App C | 615 |  | In Eq. C5-5b, replace " $\mathrm{t}=0$ " with " $\mathrm{t}<0$ " |

