Corrections Thermodynamics by R. Hentschke (May 8, 2019)

incorrect                              corrected

p. 31 (above Eq. (2.21))          $\Delta p_z = 2m\Delta z/\Delta t$          $\Delta p_z$

p. 57 (above Eq. (2.124))        $2\pi R\tilde{\gamma}\cos\theta = \tilde{\gamma}_{TA} - \tilde{\gamma}_{TL} = m\tilde{g}$
with $\gamma\cos\theta = \gamma_{TA} - \gamma_{TL}$

p. 57 (below Eq. (2.124))         Nobel Prize in chemistry         Nobel Prize in physics

p. 65 (line above Eq. (2.149))    $-T \left. \frac{\partial P}{\partial V} \right|_T \left. \frac{\partial V}{\partial T} \right|_P$\hspace{1cm} $-T \left. \frac{\partial P}{\partial V} \right|_T \left. \frac{\partial V}{\partial T} \right|_P^2$

p. 100 (in example)             Typo-Amphiphilic

p. 105 (in figure caption)       ...(4.102)...

p. 115 middle                    ...

ibid. (2nd eqn. from bottom)     ...

p. 116 middle                    ...

Fig. 3.18                      see below

p. 192 (Eq. (5.77))            ...

p. 195 (3rd line from bottom)   ...

p. 238 (last paragraph)         ...

ibid.                           ...

throughout chapter 7            ...

p. 245 (Eq. (7.27))            ...

p. 246 (Eq. (7.31))            ...

p. 248 (line above Eq. (7.44)) ...

p. 251 (Eq. (7.61))            ...

p. 252 (eqn. above (7.63))     ...

p. 256 (3rd line from top)      ...

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ibid. ... is an ... ... is a ...

incorrect corrected

p. 256 (above Eq. (7.78)) ... (8.77) ... ... (7.77) ...

p. 257 (sentence below (7.86)) ... the velocity ... relative ... ... is the velocity ... relative to ...

p. 259 (line above (7.103)) ... cf. (1.51) ... ... cf. (1.51), ...

p. 260 (2nd eqn. from top) ... (8.94) ... ... (7.94) ...

ibid. (4th eqn. from top) ... (8.94)(8.95)(8.96) ... ... (7.87)(7.95)(7.99) ...

ibid. (Eq. (7.104)) ... (8.77)(8.100) ... ... (7.77)(7.100) ...

ibid. (Eq. (7.104)) ... (8.83) ... ... (7.83) ...

ibid. & Table 7.2

\[ \mu_i \]

\[ \mu_i / m_i \]

p. 261 (Example)

\[ \frac{dx^{(\nu)}_{\text{t}}} {dt} = \nu \cdot \frac{dn}{dt} \] \[ \frac{dx^{(\nu)}_{\text{t}}} {dt} = \nu \cdot \frac{1}{\mu} \cdot \frac{dn}{dt} \]

ibid.

... (1) \[ \mu_{A} \]

... (2) \[ \mu_{B} \]

p. 262

... \rho[m_A] ... and ... \rho[m_B] ... ... \rho[m_A]/m_A ... and ... \rho[m_B]/m_B ...

p. 267 (8 lines above (7.131)) ... less than one ... ... greater than one ...

p. 274 (3 ×)

RNS RNA

p. 275 (sentence above (7.141)) According to Eq. (7.139) ... According to Eq. (7.140) ...

corrected Fig. 3.18:

\[
\begin{array}{c}
\begin{array}{c}
X \\
0.2 \\
0.4 \\
0.6 \\
0.8 \\
1.0 \\
\end{array}
\end{array}
\begin{array}{c}
\begin{array}{c}
2.0 \\
2.5 \\
3.0 \\
3.5 \\
4.0 \\
4.5 \\
5.0 \\
\end{array}
\end{array}
\begin{array}{c}
T [10^3 \text{ K}] \\
\end{array}
\end{array}
\]
The first paragraph contains the sentence: In addition we may identify $\delta L$ in Eq. (5.38) with $\delta R$ in Eq. (5.45). As the next sentence points out, we do not stretch a single polymer chain however. We deform many chains inside a macroscopic sample. A more detailed calculation shows that in the case of a rubber sample, whose volume to very good approximation is constant during the deformation, we obtain $\delta S/\delta L\big|_T \approx -3k_B N_c \delta L/L_0^2$ in the limit of small strain. Here $N_c$ is the number of chains in the sample. In particular we notice that the dependence on the segment length $a$ has disappeared - which is important! Readers familiar with polymer physics probably know that $a$ in molecular theories of single polymer conformation does depend on temperature as well as on the specific polymer.