## Useful Physical Constants

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Value &amp; Unit</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Π</td>
<td>3.1415927</td>
<td>Circumference/diameter ratio</td>
</tr>
<tr>
<td>e</td>
<td>2.7182818</td>
<td>Base of natural logarithms</td>
</tr>
<tr>
<td>h</td>
<td>(6.62619 \times 10^{-27}) erg s; (6.62619 \times 10^{-34}) J s</td>
<td>Planck’s constant</td>
</tr>
<tr>
<td>c</td>
<td>(2.997925 \times 10^{10}) cm s(^{-1}); (2.997925 \times 10^{8}) m s(^{-1})</td>
<td>Velocity of light</td>
</tr>
<tr>
<td>N</td>
<td>(6.0221 \times 10^{23}) /mol; (6.0221 \times 10^{26})/k mol</td>
<td>Avogadro’s number</td>
</tr>
<tr>
<td>k</td>
<td>(1.3806 \times 10^{-16}) erg/K; (8.6173 \times 10^{-5}) eV/K</td>
<td>Boltzmann constant</td>
</tr>
<tr>
<td>amu</td>
<td>(1.66053 \times 10^{-27}) kg; (1.4924 \times 10^{-10}) J; (931.4218) MeV</td>
<td>Atomic mass unit</td>
</tr>
<tr>
<td>m(_e)</td>
<td>(9.109334 \times 10^{-31}) kg</td>
<td>Rest mass of electron</td>
</tr>
<tr>
<td>F</td>
<td>96485.2 C/mole</td>
<td>Faraday constant</td>
</tr>
<tr>
<td>R</td>
<td>8.312 J/mole/K;</td>
<td>Ideal gas constant</td>
</tr>
<tr>
<td></td>
<td>0.08205 l atm/mol/K</td>
<td></td>
</tr>
<tr>
<td>a(_0)</td>
<td>0.529177249 Å</td>
<td>Bohr’s radius of H- atom</td>
</tr>
<tr>
<td>e(^-)</td>
<td>(1.60221 \times 10^{-19}) C/e; (4.80663 \times 10^{-10}) esu/e</td>
<td>Electric charge per electron</td>
</tr>
</tbody>
</table>