Errata (April 2023)

1) The final subscript in the first equation on the top of page 53 should be a "2" instead of a "1", so the equation should read

$$|\epsilon_1\rangle\,(0) = \lambda_2\,|\epsilon_2\rangle\,.$$

2) On the right side of the final equation on the page 29, the sign between the two sine terms should be a minus sign, so the equation should read

$$\int_{-\pi}^{\pi} \sin mx \sin nx\ dx = \left[\frac{\sin(m-n)x}{2(m-n)} - \frac{\sin(m+n)x}{2(m+n)}\right]\Big|_{-\pi}^{\pi} = 0$$

3) In the statement of Problem 9 on page 31, the third basis vector should be $\vec{\epsilon}_3 = -2\hat{j} + 2\hat{k}$.

4) The lower limit in the three integrals in Eq. 2.30 on page 46 should be negative infinity $(-\infty)$ rather than positive infinity.

5) In the last line on page 102, the umlaut in "Schrödinger" should be over the "o" rather than over the "d".

6) In the fifth full paragraph on page 109 (beginning with "So once again..."), the phrase "E is greater than V" should be "E is less than V" in classically forbidden regions.

7) The second line on page 122 should say "... and back to +1".

8) The caption of Figure 4.15 on page 127 should say "wide" rather than "narrow".

9) In the second portion of the first paragraph on page 131 (just below Eq. 4.35), the word "finite" should be "infinite": "...the function $\psi(x) = e^{ik_0 t}$, which has infinite spatial extent...".

10) The equation on the last line of page 135 should include a factor of "i" in the exponential before $\frac{(-p_0+p_0)x}{\hbar}$.

11) On page 136 the definition of the variable b in the sentence beginning "Using the same definite integral given earlier ..." should be $b = i\frac{p-p_0}{\hbar}$ with no leading minus sign.

12) The fourth line from the top of page 156 should say "...on the left side of Eq. 4.8" rather than the right.

13) In the footnote on page 168, the word "is" should be "in": "...the *change* in potential energy...".

14) An extra word ("the") appears in the sentence eight lines above the bottom of page 176.

15) In the last equation on the bottom of page 205, the term just before the final equals sign ($=$) should contain the variable a_0 rather than a_1.

16) In Eq. 5.98 on page 210, the factor x in argument of the Hermite polynomial H_n should be outside the square-root symbol, as $H_n(\sqrt{\frac{m\omega}{\hbar}}x)$.