Errors in **Introduction to Quantum Mechanics in Chemistry** by Mark Ratner and George Schatz

Preface

Page x, line 8, “Problems 2.12” should be “Problems 2.11”

Chapter 1

Exercise 1.5, part 2, add to the parenthetic expression the sentence: Assume that the intensity refers to photons per unit area.

Chapter 2

Page 27, change m_i to m_j before Eq. 2.9b.

Page 35, two lines before Eq. (2.41), replace “any Hermitian operator” by “any operator corresponding to a physical observable”.

Chapter 3

Eq. 3.21 should be:

$$< x^2 >= \frac{a^2}{3}\left(1-\frac{3}{2\pi^2 n^2}\right)$$

Eq. 3.22 should be:

$$< \Delta x >= \sqrt{< x^2 > - < x >^2} = \sqrt{< (x - < x >)^2} = \sqrt{\frac{a^2}{12}(1-\frac{6}{\pi^2 n^2})}$$

Eq. 3.26 should be:

$$(\Delta x)(\Delta p) \cong \frac{hn}{2a} \bullet \sqrt{\frac{a^2}{12}(1-\frac{6}{\pi^2 n^2})} = \frac{nh}{4\sqrt{3}}\sqrt{1-\frac{6}{\pi^2 n^2}} > \frac{\hbar}{2}$$

Page 48, second line, replace “(FEMO) imodel s a simple model” with “(FEMO) model is a simple model”

problem 3.10 It would be best to add a hint: The area of the molecule is 5.09Å^2.

Chapter 4

Eq. 4.58
func{∂ over {∂u}} should be
func{∂ over {∂ theta}}

Chapter 7

Eq. 7.19

2.8377 should be 2.8477

Chapter 10

problem 10.4 It is better to take K=4.375 than 1.75

Chapter 12

problem 12.9 (d) “effective” should be “net”

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