

C9550: Examples for Exam (E4E)

M. Hollas: Modern Spectroscopy and PW Atkins, Physical chemistry, **8th Edition**

1. Level populations: Hollas, Worked example 2.1, pg. 30
2. The notion of an eigenfunction: Atkins, Example 8.5, pg. 262
3. Calculating an expectation value: Atkins, Example 8.7, pg. 268
4. Rotational energy levels: Hollas, Worked example 1.2, pg. 22
5. Rotational transitions: Hollas, Worked example 5.1, p. 108
6. Zero-point energy of a harmonic oscillator: Atkins, Exercise 9.8a, pg. 316
7. Estimating harmonic oscillator force constant: Atkins, Exercise 9.9a, p. 316
8. Electronic spectroscopy of diatomic molecules: Hollas, Worked example 7.3, p. 243