C9550: **E**xamples **f**or **E**xam (**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