

Rubric for Electronic-Vibrational Spectrum of Gaseous I₂ - WRITTEN REPORT

GSI: Emily Chu, Spring 2007 (Updated: 02/07/07)

Title/Abstract- 4 points

- Paragraph form
- Key results/conclusion
- Calculated values, significance
- Units and error

Introduction- 10 points

- Theoretical concepts- such as-
 - Anharmonic vs. harmonic oscillator
 - Electronic/vibrational transitions
 - Birge-Sponer plot
 - Deslandres table
 - Answering the questions may be useful.
- Techniques
 - How does the spectrometer work
 - Why was this technique suitable

Experimental Procedure- 3 points

- Concise paragraph form
- Past tense
- Details- model/brand of instruments, temperature
- Allowed to use the term “we”

Calculations/Results/Error Analysis - 20 points

- For #6, print out the labeled Excel worksheet and/or explain how you set it up
- Sources of error discussion.
- Presentation of results with figures and tables including-
 - Birge-Sponer Plot
 - Deslandres table
 - Morse Potential
 - Neat hand-drawings are allowed

Discussion-12 points

- Interpret the results/calculations- ties to theory
- Confidence in your results (from error analysis and sources of error)

References/Citations – 1 point

- ACS style (refer to handout or library resources)