

P5260: HELIUM NANODROPLET ISOLATION SPECTROSCOPY IN AN UNDERGRADUATE TEACHING LABORATORY

Paul Raston, James Madison University

- Gas phase spectra of simple asymmetric tops contain 1000's of lines!
- This makes analysis in undergrad P-Chem lab unfeasible
- Helium nanodroplets provides “the ultimate spectroscopic matrix“ for P-Chem lab!
- Molecules are cooled from 300 K to 0.4 K
- Only a few states populated and asymmetry splittings typically “washed out”
- Spectra is therefore greatly simplified and well suited for undergrad analysis
- Analysis via PGOPHER or combination differences

