

Abstract Submitted
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High Resolution Fluorescence Excitation and Dispersed Emission Spectra of Organic Molecules in Superfluid Helium Nanodroplets¹ ALKWIN SLENCZKA, RICARDA RIECHERS, DOMINIK PENTLEHNER, ALEXANDER VDOVIN, Institutue for Physical and Theoretical Chemistry, University of Regensburg — Superfluid helium droplets serve as a very gentle cryogenic matrix for molecular spectroscopy. The low temperature and high thermal conductivity of superfluid helium droplets are of great advantage for the investigation of dispersed emission spectra of molecules. As a complement to the fluorescence excitation spectrum the emission spectra provide important details on dynamic processes of intramolecular as well as intermolecular nature. This will be demonstrated for various examples such as intramolecular proton tunnelling, isomeric van der Waals complexes, tautomerization and microsolvation.

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