

Dienstag, 28.06.2011

Hörsaal D, Chemie Zentralbau, 17:15 Uhr

**Sprecher:**

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**Thema:**

**Helium Nanodroplet Isolation:  
Spectroscopy of Molecular  
Structures and Ultra-fast Physics  
Chilled to the Bone**

**Abstract:**

Helium nanodroplets can be utilized to isolate molecules, clusters or organic nanostructures at temperatures below 1K. Laser-spectroscopic experiments are presented aiming in different directions. On the one hand, because of the low temperatures and the superfluid properties of the droplets, high spectral resolution is achieved in the characterization of electronic transitions. Hence detailed information on excitonic excitations in organic semiconducting nanostructures can be achieved. On the other hand, femtosecond real-time experiments are carried out to probe the properties of the superfluid helium droplets itself, such as the occurrence of a Landau critical velocity.

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