**Angle-resolved photoemission from neutral clusters and aerosol particles**

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Light interacts differently with small particles compared with bulk materials or gas phase molecules, producing spectral signatures that strongly depend on particle properties, such as size, shape, or architecture. Our studies focus on a specific class of particles, namely on neutral molecular aggregates that are held together by weak intermolecular forces. We use various spectroscopic methods for the characterization of these aggregates. In this talk, I concentrate on the interaction of ultraviolet light with clusters and nanosized aerosol particles. Three examples are discussed. In the first one, we use angle-resolved photoelectron spectroscopy to probe the structure of sodium nanosolutions. In the second example, we suggest angle-resolved photoemission of aerosol particles as a new way to determine the mean free path of electrons in solids and liquids. In the last example, we combine a uniform Laval expansion with VUV ionization and mass spectrometric detection to study gas phase nucleation at the molecular level.