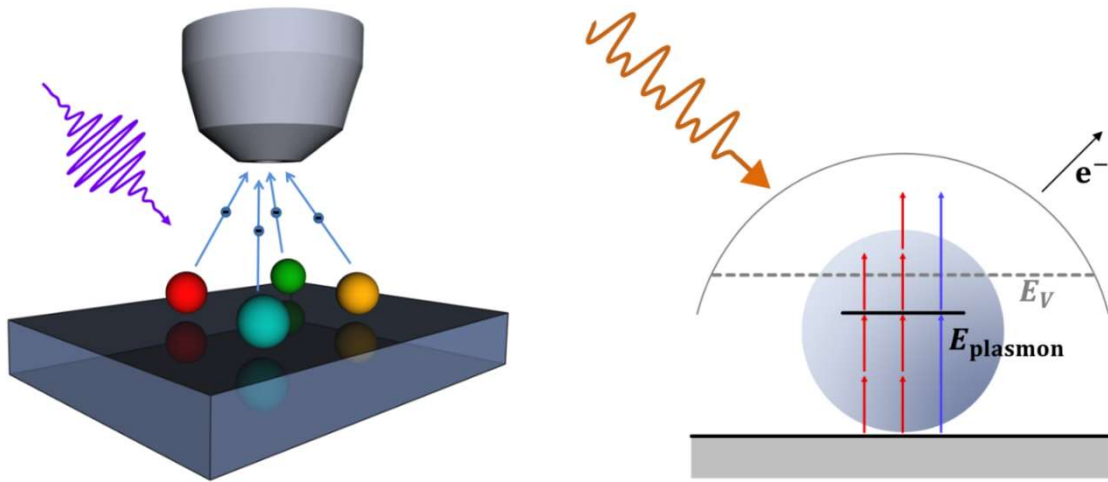


# PhD project available

## at the University of Rostock, Germany

### *Imaging Photoelectrons from Individual Nanoparticles at Surfaces*



#### Project description:

**Nanoparticles** can give rise to an enhanced electric field due to collective electron excitations, so-called **plasmons**. These plasmons can lead to extremely efficient photoelectron emission. The aim of this project is to **study and control the electron emission from individual nanoparticles** on surfaces. To this end, femtosecond laser pulses are employed, while electron emission will be investigated by means of **time-of-flight photoemission electron microscopy** (ToF-PEEM), combining **high spatial resolution** and simultaneous energy detection.

#### Experimental Methods (training will be provided)

- Photoemission Electron Microscopy (PEEM)
- Ultrahigh vacuum, cluster production & deposition
- Femtosecond Laser Pulses
- Scanning Probe Microscopy

#### Requirements

- Master degree in Physics or related
- Ambition to unravel underlying physical mechanisms
- Interest in interdisciplinary and collaborative research

The position is a "Research Assistant (EG 13 65% TV-L pay scheme, qualification as PhD)".

#### Contact

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