**Light-Induced Polymer Movement of Azo-Polymers toward Light-Driven Nano Machine**

**UV Plasmonics**

- **UV—frontier of plasmonics**
  - Permittivity of Al, In, Ag, and Au
  - Raman spectra of HeLa cells
  - DUV-LSPR by aluminum nanoparticles

- **Why DUV?**
  - Raman spectra of adenine nanocrystals measured w/ and w/o aluminum tip
  - TERS setup
  - Absorption spectrum of adenine

- **DUV-TERS and SERS**
  - DUV excitation laser (λ=266nm)
  - AFM Tuning fork
  - Adenine nanocrystals
  - Quartz substrate
  - Quartz objective NA 0.25

**Functional Photonics:**
Study of novel nano-optical/photonics functions originating from the interaction between photon and nanostructured materials (2014-2016)
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