

CCMX Advanced Course
**“Combining Structural & Analytical Investigations of Matter at the Micro-,
Nano and Atomic Scale”**

5.-8. 11. 2018 ETH Zürich

Station 1

WiTec CRM 200

(Location: HCI E528)

Confocal Raman Spectroscopy demo (60 minutes)

Raman Spectroscopy detects and analyses the interaction of monochromatic light with matter. It is sensitive to vibrational, rotational and other low-frequency modes of atomic motion and is employed to provide chemical, structural and mechanical information about the material. The technique is complementary to infrared spectroscopy and is limited to Raman-active materials (non-metals).

Dr. Micha Calvo

Introduction:

- ✓ Concept of Raman microscopy
- ✓ Overview of Raman spectroscopy applications
- ✓ Sample preparation

Raman Spectroscopy:

- ✓ Confocal optics
- ✓ Optimization of experimental set-up
- ✓ Raman spectroscopy on semiconductors
- ✓ Artifacts
- ✓ Wavelength-dependent effects
- ✓ Line scans and mapping