The NMI is an application-oriented research institute that makes scientific knowledge available to the business world

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PD Dr. Dai Zhang and Prof. Dr. Monika Fleischer,

Workshop Registration

www.nmi.de/cost

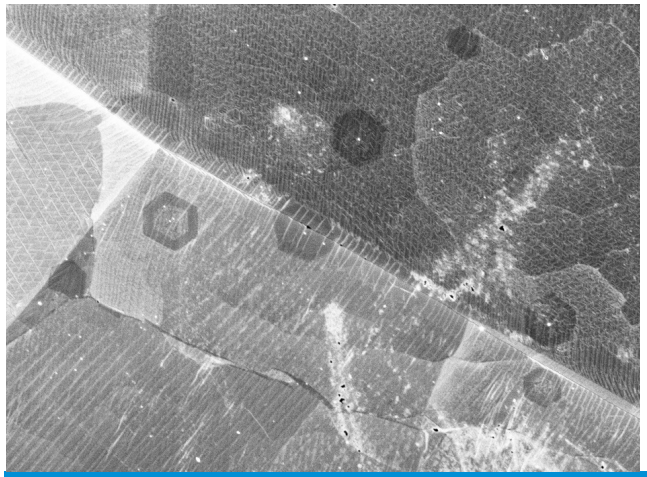
Industry	130 Euro
Academics	90 Euro
Students	free, please register online via the booking page

(Fee includes lunch and coffee/tea/refreshments)

NMI is a member of the COST Action MP1302 Nanospectroscopy
www.cost-nanospectroscopy.eu/

The venue of the Training School:

Natural and Medical Sciences Institute
at the University of Tübingen, NMI
Markwiesenstrasse 55
72770 Reutlingen
Germany



Workshop: Raman Spectroscopy and surface analytics

» for advanced correlative characterization of carbon nano-materials

5th October 2016
NMI Innovationsforum, Reutlingen

Natural and Medical Sciences Institute (NMI) at the University of Tübingen

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Workshop: Raman Spectroscopy and surface analytics

EBERHARD KARLS UNIVERSITÄT TÜBINGEN

NMI achieving results

›› for advanced correlative characterization of carbon nano-materials

This workshop will give an overview of state of the art Raman and TERS imaging in addition to surface sensitive spectroscopy with AES, XPS and low energy EDS as well as AFM imaging.
Examples for advanced material characterisation beyond morphology (nano-chemical, nanoelectrical and nano-mechanical properties) with a focus on carbon materials will be presented and demonstrated.

Attendees may bring their own, selected samples.

Topics

- Raman spectroscopy
- Tip-enhanced Raman spectroscopy
- Scanning probe microscopy (AFM, STM)
- Confocal Raman imaging
- Electron microscopy (SEM, EDX, STEM)
- Scanning Auger microscopy
- Chemical vapour deposition of carbon nanomaterials

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Workshop Programme

Wednesday, October 5, 2016

8:30	Registration
9:00 - 12:30	**Session I: Introduction to Methods and Applications / Industry**
9:00	Opening remarks **Alfred Stett,** NMI Reutlingen
	Introduction by **Monika Fleischer**, University of Tübingen and **Claus J. Burkhardt**, NMI Reutlingen
09:30	**Fabian Perez**, Carl Zeiss Microscopy GmbH
	Correlative Light / Scanning Electron Microscopy and surface sensitive X-ray Spectroscopy
10:00	**Hartmut Stadler**, Bruker Nano Surfaces Division
	New AFM developments to help you improve roughness and thin film application QA/QC, Corrosion and Battery R&D. Nanoscale Characterization no matter what - mechanical, chemical and electrical.
10:30	**Coffee break and Exhibition**
11:00	**Marc Richter**, Renishaw plc
	Renishaw InVia Raman Microscopy from Basics to Applications
11:30	**Olaf Hollricher**, WITec Wissenschaftliche Instrumente und Technologie GmbH
	RISE Microscopy: Correlative Raman-SEM Imaging for Comprehensive Nano-materials Analysis
12:00	**Miriam Unger**, Physical Electronics GmbH / Anasys Instruments Corporation
	Complementary Techniques for Nanoscale Infrared Imaging and Spectroscopy - AFM-IR and s-SNOM
12:30	**Lunch break, Posters and Exhibition**
14:30 - 18:00	**Session 2: Introduction to Methods and Examples from Research / Academia**
14:30	**Renato Zenobi**, ETH Zürich, Switzerland
	Tip Enhanced Raman Spectroscopy
15:15	**Georg Duesberg**, Trinity College Dublin, Ireland
	2D Materials and Isotope Labeling
16:00	**Coffee break and Exhibition**
16:30	**Dai Zhang**, University of Tübingen
	Confocal Microscopy and Parabolic Mirror Spec trometer
17:00	**Manuel Martina**, NMI Reutlingen
	Development and Application of novel Probes for Tip Enhanced Raman Spectroscopy
17:30	**Ronny Löffler / Markus Turad**, Center LISA+, University of Tübingen
	Auger Electron Spectroscopy (AES)
18:00 - 18:30	**Session 3: Short presentations** Horiba Ltd., Kleindiek Nanotechnik GmbH, neaspec GmbH
18:30 - 21:00	Get-together with snacks, posters and exhibition, including „bring-your-own-samples“: Opportunity to measure participant samples on the present demo equipment.

Following the Workshop will be a 2 day Training School (October 6-7). Further information http://www.cost-nanospectroscopy.eu/training-raman.html.