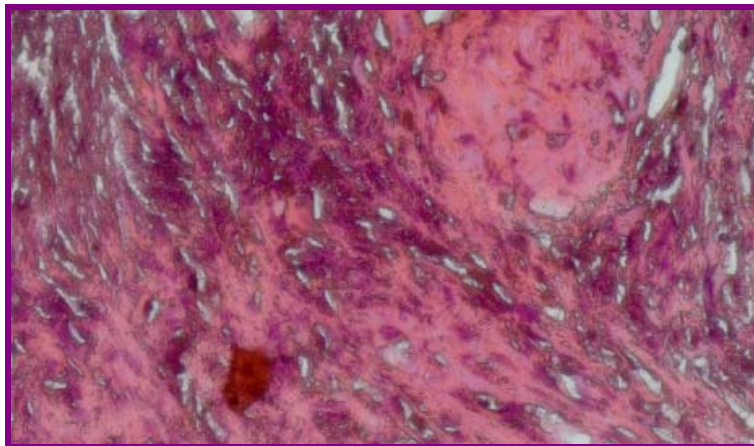


1st Bochum Workshop on Vibrational Spectroscopy

*with focus on
new trends in imaging methods
for life science and
biomedical applications*

October 18-19, 2011



Organisation:

K. Gerwert, M. Diem and H.M. Heise

RUHR-UNIVERSITÄT BOCHUM

LS Biophysik

RUB

Organisation Committee

Lehrstuhl für Biophysik
Ruhr-Universität Bochum



Klaus	Gerwert
Max	Diem
H. Michael	Heise
Joanna	Stachnik
Julian	Ollesch

Organisation in cooperation with



Collaborative Research Center SFB 642
“GTP- and ATP-dependent membrane processes

RESEARCH DEPARTMENT Protein Research Department (PRD)
Protein

PURE Protein research Unit Ruhr within Europe

Programme

Tuesday, 18th October 2011		
8:30 – 9:00		Registration
9:00 – 9:05	Klaus Gerwert	Welcome and opening
9:05 – 9:20	Max Diem	<i>Vibrational Micro(spectro)scopy: State of the art and future directions</i>
		Biomedical Photonics Overview - Chair: Max Diem
9:20 – 9:45	Benjamin Bird	<i>Strategies for mid-IR Spectral Histopathology (SHP)</i>
9:45 – 10:10	Klaus Gerwert	<i>Vibrational micro(spectro)scopy at different scales: Proteins, membranes and living cells</i>
10:10 – 10:35	Michel Manfait	<i>Raman and IR imaging: from cell analysis to in vivo developments</i>
10:35 – 11:00	Coffee-BREAK	
		Raman Imaging - Chair: Michel Manfait
11:00 – 11:25	Hugh Byrne	<i>Improving measurement strategies in Raman Spectroscopy of tissue and cells</i>
11:25 – 11:50	Christoph Krafft	<i>Progress in Raman-based assessment of primary and secondary brain tumors</i>
11:50 – 12:15	Ralf Blanke Horiba Jobin Yvon	<i>Raman spectroscopy for Life Science Applications - New technological perspectives to gain a higher information content</i>
12:15 – 13:30	Lunch-BREAK (Mensa)	
		Advanced Vibrational Techniques - Chair: Hugh Byrne
13:30 – 13:55	Volker Deckert	<i>Structural information of molecules - how small can we go with TERS?</i>
13:55 – 14:20	Alexandre Dazzi	<i>AFMIR - a new way to make infrared spectronanoscopies</i>
14:20 – 14:45	Stefanie Landwehr Leica Mikrosysteme	<i>TCS CARS – label-free imaging at video rate</i>
14:45 – 15:15	Ute Schmidt / WITec	<i>Confocal Raman Imaging in the Life Sciences and Pharmaceutical Research</i>
15:15 – 15:45	Coffee-BREAK	
		Spectral Preprocessing - Chair: Axel Mosig
15:45 – 16:10	Miloš Miljković	<i>Pre-processing and Diagnostic Algorithms for Spectral Histopathology (SHP)</i>
16:10 – 16:35	Peter Gardner	<i>FTIR Microscopy of biopsy tissue: data pre-processing using the resonant Mie scattering (RMieS) EMSC algorithm</i>
16:35 – 17:00	Bayden Wood	<i>Resonant Mie Scattering (RMieS) correction applied to FTIR images of biological tissue samples</i>

17:00 – 17:20	Coffee-BREAK	
17:20 – 18:00		<i>Round Table discussion Chair: Max Diem</i>
18:00 – 19:00		Exhibition - Company booths and discussions
from 20:00	Dinner (Park Inn Bochum)	

Wednesday, 19th October 2011

		Emerging Hardware - Chair: Volker Deckert
8:30 – 9:00	John Wilson / <i>Agilent Technologies</i>	<i>New Technologies for Infrared Biological Imaging</i>
9:00 – 9:30	Richard Mendelsohn	<i>Vibrational Spectroscopy and Microspectroscopic Imaging: Applications to Skin Pharmacology and Biophysics</i>
9:30 – 10:00	Philip Heraud	<i>FTIR spectroscopy of living human stem cells using synchrotron radiation</i>
10:00 – 10:30	Matthias Godejohann / <i>MG Optical Solutions</i>	<i>Quantum Cascade Lasers - reliable light sources for mid-infrared microscopy and spectroscopic applications</i>
10:30 – 11:00	Coffee-BREAK	
		Emerging Software - Chair: Michael Heise
11:00 – 11:30	Martin Luft / <i>Bruker Optik</i>	<i>New Software Package for Data Acquisition, Processing, Evaluation and Visualization in FTIR and Raman Microscopy and Imaging</i>
11:30 – 12:00	Axel Mosig	<i>Novel Tools for Spectral Image Annotation and Registration</i>
12:00 – 12:30	Klaus Gerwert / Max Diem	Final discussion - Closing