Seminar Programme
Advanced Techniques in Vibrational Spectroscopy

Faculty of Chemistry Jagiellonian University
Gronostajowa 2, 30-387 Krakow

Thursday, 21st June 2018

12^{00} – 12^{50} REGISTRATION (hall, ground floor – Segment A, WCh UJ)

Room A1-01 (1st floor) **12^{55} – 13^{00} OPENING: dr hab. Kamilla Malek**

SESSION 1 **Raman Imaging** Chairman: **dr habil. Agnieszka Kaczor**

13^{00} – 13^{30}	**Dr. Maxime Tchaya**	WITec	***High Resolution Confocal Raman imaging: Principle, Application and Instrumentation***
13^{35} – 14^{15}	**Prof. Halina Abramczyk**	PŁ	***The Biochemical, Nanomechanical and Chemometric Signatures of Brain, Breast and Intestine Cancers***
14^{20} – 14^{35}	**Dr. Katarzyna Majzner**	UJ	***Raman spectroscopy in single cell-drug and DNA-drug studies***
14^{40} – 14^{55}	**Dr. Marta Pacia**	JCET	***Raman imaging of vascular endothelial cells within blood vessels in murine models of cancer metastasis and diabetes***

14^{55} – 15^{30} COFFEE BREAK

SESSION 2 **Advanced Techniques in Raman Spectroscopy** Chairman: **dr. habil. Beata Brożek-Pluska**

15^{30} – 16^{10}	**Prof. Andrzej Kudelski**	UW	***New Types of Nanoresonators for Shell-isolated Nanoparticle-enhanced Raman Spectroscopy***
16^{15} – 16^{35}	**Dr. Katarzyna Marzec**	JCET	***Resonance Raman Spectroscopy in Studies of Red Blood Cells.***
16^{40} – 16^{55}	**Dr. Krzysztof Czamara**	JCET	***Investigation of atherosclerosis using novel fiber-optic Raman probe***
17^{00} – 17^{15}	**Alicja Menżyk**	US	***A question of time - estimating the age of bloodstains with Raman spectroscopy***
17^{20} – 17^{35}	**Joanna Banaś**	AGH	***TiO_2/MoS_2 heterostructures as a photoelectrodes with long term stability***
17^{40} – 17^{55}	**Natalia Niedzielska**	PWr	***Shedding Light on Peptide Aggregation***
18^{00} – 18^{15}	**Natalia Trochanowska-Pauk**	PWr	***Applicability of ATR-FTIR spectroscopy to measure protein peroxidation***

Friday, 22nd June 2018

Room A1-01 (1st floor)

SESSION 3 **FTIR Imaging** Chairman: **dr habil. Kamilla Malek**

9^{00} – 9^{30}	**Dr. Jan Wuelfken**	Agilent	***New possibilities to achieve pixel resolution down to 300 nm with FTIR-Imaging***
9^{35} – 9^{55}	**Dr. Tomasz Wrobel**	IFJ	***Current state-of-art IR imaging techniques and their capabilities in biomedical sciences***
10^{00}-10^{20}	**Dr. habil. Joanna Chwiej**	AGH	***The use of FTIR imaging for ex vivo investigation of physiological and pathological processes of different etiology***
10^{25}-10^{45}	**Dr. Joanna Debuigh**	MU	***Multi-modal imaging of tumour heterogeneity in a glioma xenograft model***

10^{45}–11^{05} COFFEE BREAK

SESSION 4 **Advanced techniques in FTIR spectroscopy** Chairman: **dr Katarzyna Marzec**

11^{05} – 11^{35}	**Dr. Andreas Huber**	NeaSpec	***Nano-FTIR nanoscopy for organic and inorganic material analysis***
11^{40}– 12^{20}	**Prof. Szczepan Zapotoczny**	UJ	***Atomic Force Microscopy for Surface Imaging and Beyond***
12^{25} – 12^{45}	**Dr. Marcin Gorecki**	IChO	***Vibrational Circular Dichroism as a Tool for Sensing Chiral Molecules in Solution and Solid-state***
12^{50} – 13^{05}	**Agnieszka Skoczeń**	AGH	***Biochemical changes occurring in the liver and kidneys of rat after intravenous injection of the D-mannitol coated superparamagnetic iron oxide nanoparticles***
13^{10} – 13^{25}	**Marta Grzelak**	AGH	***Biochemical composition of ovarian tumours: First step into understanding pathogenesis***

Hall, 1st floor – segment A

SESSION 5 **Poster Session**

13^{30} – 15^{00} Poster session and lunch

14^{30} – 16^{00} Presentation of FTIR and Raman imaging systems

In the framework of the seminar, the poster session will be held and abstracts will be published in an electronic book of abstracts. Additionally, each of participants will receive a certificate of participation.

The seminar is **free of charge**, but the number of participants is limited to 120 people. Travel and accommodation are provided by participants on their own.

Abstract book can be found here.

Organizers:

Dr. habil. Kamilla Małek and Prof. Małgorzata Barańska
Raman Imaging Group, Faculty of Chemistry of Jagiellonian University in Krakow
MS Spektrum and Agilent Technologies, Inc. Headquarters
LOT-QuantumDesign GmbH and WITec
Neaspec GmbH

Organizing committee:

Monika Dudek (Secretary, e-mail: zor@chemia.uj.edu.pl)
Ewelina Bik
Aneta Blat
Bożena Kukla
Ewa Machalska