



Seminar

Coherent Raman Microscopy and other nonlinear imaging techniques - development and applications

Faculty of Chemistry, Jagiellonian University in Krakow

Raman Imaging Group

February 21-22, 2022

Monday, 21st February 2022

13:00 – 13:15

Introduction: Malgorzata Baranska

Chairman: Katarzyna Majzner

13:15 – 13:45

Katsumasa Fujita (Osaka University, Japan)

“Resonant Raman imaging of cytochromes in living cells”

13:45 – 14:15

Halina Abramczyk (Lodz University of Technology, Poland)

“Linear and nonlinear optics in cancer research”

14:15 – 14:45

Krzystof Brzozowski (Jagiellonian University in Krakow, Poland)

“Simple SRS for complex investigations”

14:45 – 15:15

Ewelina Matuszyk (Jagiellonian University in Krakow, Poland)

“Toward Raman subcellular imaging of endothelial dysfunction”

15:15 – 15:45

Coffee Break

Chairman: Kamilla Malek

15:45 – 16:00

Sponsor presentation: **WITec**

16:00 – 16:30

Francisco Riel Neto (Heinrich Heine University Düsseldorf, Germany)

“Femtosecond Stimulated Raman Microscopy Technique”

16:30 – 17:00

Carolin Borbeck (Heinrich Heine University Düsseldorf, Germany)

“Femtosecond Stimulated Raman Microscopy Application in Polymer Science”

17:00 – 17:30

Adam Wojciechowski (Jagiellonian University in Krakow, Poland)

	<i>"Selected applications of nitrogen-vacancy color centers in diamond"</i>
17:30 – 18:00	Zhilun Zhao (Columbia University, USA) <i>"Ultra-bright Raman dots for multiplexed optical imaging"</i>
18:00 – 18:05	Closing remarks: Malgorzata Baranska

Tuesday, 22th February 2022

08:55 – 09:00	Opening: Krzysztof Brzozowski
	Chairman: Krzysztof Brzozowski
09:00 – 09:30	Kota Koike (Osaka University, Japan) <i>"Highly sensitive Raman imaging of molecules in living cells"</i>
09:30 – 10:00	Julian Moger (University of Exeter, UK) <i>"Shedding New Light on Plant Biology with Coherent Raman Imaging"</i>
10:00 – 10:15	Federico Vercuccio (Politecnico di Milano, Italy) <i>"AI assisted high speed broadband Coherent anti Stokes Raman scattering in the fingerprint region"</i>
10:15 – 10:30	Arianna Bresci (Politecnico di Milano, Italy) <i>"Multimodal non linear optical microscopy to study tissues and cells"</i>
10:30 – 11:00	Coffee break
	Chairman: Anna Nowakowska
11:00 – 11:15	Sponsor presentation: KAWA.SKA
11:15 – 11:30	Sponsor presentation: Fluence
11:30 – 12:15	Andreas Zumbush (University of Konstanz, Germany) <i>"Non-linear Raman microspectroscopy and imaging"</i>
12:15 – 12:45	Michael Schmitt (Friedrich Schiller University Jena, Germany) <i>"Multimodal non-linear Imaging for Biomedical Diagnosis"</i>

12:45 – 13:15	<p>Aleksandra Borek-Doros (Jagiellonian University in Krakow, Poland)</p> <p><i>“Accumulation of lipids and carotenoids as a marker of leukocytes activation studied by spontaneous and stimulated Raman spectroscopy”</i></p>
13:15 – 13:45	<p>Adriana Adamczyk (Jagiellonian University in Krakow, Poland)</p> <p><i>“Labelled-Spontaneous Raman and Stimulated Raman Scattering on the track of chemical and morphotic changes related to induced differentiation of promyeloblastic in vitro model”</i></p>
13:45 – 13:50	<p>Farewell: Malgorzata Baranska</p>

Organizers:

Dr. Krzysztof Brzozowski
 Anna Pieczara, PhD student
 Prof. Malgorzata Baranska

Organizing committee:

Adriana Adamczyk, PhD student
 Karolina Augustyniak, PhD student
 Aleksandra Borek–Doros, PhD student
 Patrycja Leszczenko, PhD student
 Klaudia Mielnik, PhD student
 Jagoda Orleańska, PhD student
 Łukasz Pięta, PhD student
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