19th European Conference On Non-Linear Optical Spectroscopy (ECONOS 2020/2021)

Date: 26.09. – 29.09. 2021

Detailed Conference Program

	Sunday 26-Sep	
15:00	**Registration**	
17:00	**Opening (Conference Chair: Ahmed Abdelmonem, KIT)**	
17:40	**Mischa Bonn** Keynote	Novel Molecular Terahertz Spectroscopies
18:20	**Welcome**	
21:00	**Day End**	

Monday 27-Sep

08:00		**Registration**	
08:40	High-order responses in t & f domain	**MARCUS MOTZKUS***	An obituary of MARCUS MOTZKUS
08:50		Arnulf Materny	1. Former cooperation with MARCUS MOTZKUS 2. Ultrafast Charge-Pair Dynamics in Organic Semiconductor Devices Under the Influence of External Electric Fields
09:25		Michele Marrocco	The Phase Takes It All
10:00		Francesco Tani	Covariance spectroscopy of molecular gases using modulational instability in hollow-core PCF
10:20		**Coffee Break @ Exhibition Room**	
11:00	Chi2 NLO Spec. 1	Ellen Backus	Structure and Vibrational Dynamics of Interfacial Ice I_h
11:40		Julien Rehault	Phase-sensitive Sum Frequency Spectroscopy by Time-Domain Ptychograph
12:00		Elisa Palacino-González	Hydration Structure of Excess Protons in Fluctuating Polar Environments: ab initio Investigation of Mode Correlations and Time-Resolved Spectra
12:20		**LUNCH**	
14:00	INDUSTRIAL	AMPLITUDE Gabriel Loata	High Energy & High Repetition Rate Femtosecond Laser Systems for Nonlinear Spectroscopic Applications
14:20		ZURICH INSTRUMENTS Claudius Riek	Maximize measurement performance for periodic signals by optimized use of lock-in amplifiers and boxcar averagers
14:40		TELEDYNE Norbert Gulde	Advances in camera and spectrograph technologies for low light detection
15:00		EKSPLA R.Januskevicius	High spectral resolution picosecond and femtosecond SFG spectrometers
15:20			
15:40		**Poster Session, Exhibition, Coffee**	
16:00			
17:00	DUAL-COMB	Nathalie Picqué	Laser frequency combs for nonlinear spectroscopy of molecules
17:40		Oliver Heckl	Robust and Flexible Yb:fiber Laser Source for Single- and Dual-Comb Spectroscopy Applications
18:00		**Day End**	
18:20		**Steering Committee Meeting**	

* This session is dedicated to our friend and colleague, Marcus Motzkus who has left us far too soon. He has contributed a lot to our scientific community.

Tuesday 28-Sep

08:00	**Registration**		
08:40	Chi2 NLO Spec. 2	Ali Dhinojwala	Understanding Acid-Base Interactions at Solid-Liquid Interfaces
09:20		Daria Maltseva	Interaction of the TRPML1 Ion Channel's N-terminus with Biomembranes
09:40		Malik Nafa	Optically rectified comb for THz-QCL precision spectroscopy
10:00		Imran Aslam	Unique Non-Linear White Light Emission from Combustion-Derived Particles to Develop Diagnostic Biomedical Assays
10:20	**Coffee Break @ Exhibition Room**		
11:00	CARS+Other Raman	Majed Chergui	Non-linear effects with ultrashort X-ray and optical pulses
11:40		Jan-Christoph Deinert	Exploring nonlinear THz-driven dynamics on sub-cycle timescales at the TELBE facility: From Dirac materials to Higgs spectroscopy
12:00		Hanieh Fattahi	Near-Infrared Molecular Fieldoscopy
12:20	**LUNCH**		
14:00	NL Spectroscopy	Anna-Lena Sahlberg	Non-linear mid-infrared laser techniques for combustion diagnostics
14:40		Mikhail Shevchenko "	Effective Anti-Stokes Component of Low-Frequency Raman Scattering Generation under Biharmonic Excitation
15:00		Aleksei Smirnov "	Anisotropic gold nanoparticles conjugates as a prospective tool of tumor cells imaging: study by stimulated surface-enhanced Raman microscopy
15:20	**Poster Session, Exhibition, Coffee**		
16:20	**Social Events and Conference dinner****		
22:00	**Day End**		

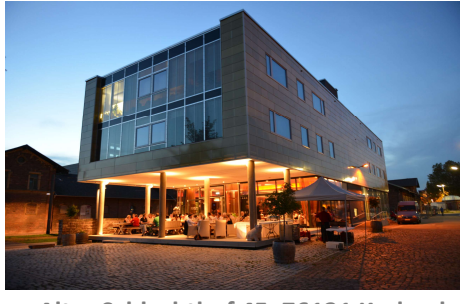
" *Webinar (originally Oral presenters, are not able to come due to COVID-19 travel restrictions)*

** **Social Events and Conference dinner**

- Conference Photo (4:20 pm):
  @ the stairs in front of the Hotel accross the street
  Please be photo site **on time**

- Discovering Karlsruhe in a double-decker bus (5:00 – 7:00 pm):
  Please be in front of Hotel main entrance on time (5:00 pm)
  Don't forget your FFP2 or surgery mask

- Conference Dinner (7:00 – 10:00 pm):
  @ Aurum Eventlocation Karlsruhe
  Alter Schlachthof 45, 76131 Karlsruhe
  The tour Bus will drop us at the restaurant.
  Back to Hotel by tram* (2, 6 or S4) or 20 min walking.
  Hotel tram station: "Rüppurer Tor"
  * Tram tickets will be handed over during the dinner.
  Dinner and "Soft drinks" are covered by ECONOS



Alter Schlachthof 45, 76131 Karlsruhe
Tram station: Tullastraße / Verkehrsbetriebe

Wednesday 29-Sep

08:00	**Registration**		
08:40	CARS	Rosa Santagata (Rep. Elodie Lin)	fs/ps-CARS spectroscopy platform for combustion thermometry and hyperspectral microscopy
09:20		Francesco Mazza	Ultrabroadband fs/ps coherent Raman spectroscopy behind optical windows via in-situ fs laser-induced filamentation
09:40		Roland Ackermann	A Study on Carbon Gasification Dynamics using Ultrabroadband Coherent Anti-Stokes Raman Scattering
10:00		Xiaodong Zhao	Picosecond Optical Parametric Amplifier Pumped by A Thin-disk Laser at 1 µm for Coherent Anti-Stokes Raman Scattering
10:20	**Coffee Break @ Exhibition Room**		
11:00	Chi2 NLO Spec. 3	Björn Braunschweig	Remote Control of Photoswitchable Amphiphiles at Aqueous Interfaces
11:40		Ahmed M. El-Zohry	Revisiting the Redox Behavior of Gold Surfaces via Sum Frequency Generation
12:00		Monika	Amino Acid Based Carbon Quantum Dots for Heavy Metal Ions Sensing Studied by Sum Frequency Generation Spectroscopy
12:20		Stijn Van Cleuvenbergen	Nucleation and crystal growth stages of gold nanoparticles probed by harmonic light scattering
12:40	**LUNCH**		
14:00	**Webinar Presentations** ***Originally poster presenters, are not able to come due to COVID-19 travel restrictions***		
15:00	**Closing Session***** **Acknowledgments - Honouring the Invited Speakers - Student Poster Awards**		
16:00	**Conference End**		

*** **Closing Session:**

- **Acknowledgments**

- **Honouring Invited Speakers**
  We will honour our invited speakers who were keen to support our conference with their time and

- **Student Poster Awards**
  Three students will be awarded for the best three posters in terms of poster quality, content, and presentation skill.

Posters: Mon 27 and Tue 28 September 2021

Chi2 NLO Spec.	Gabriel Karras	Applying non-linear spectroscopic techniques with a 100 kHz OPCPA laser system
	M. Lukas	Unravelling the Working Mechanism of Bacterial Ice Nucleating Proteins
	Clara Saak	Determining the Apparent Charge of E.Coli Membranes using Sum-Frequency Generation Spectroscopy
	Ahmed Abdelmonem	Unexpected behavior of sodium sulfate observed in experimental freezing and corrosion studies
	Ahmed Abdelmonem	Immersion versus Deposition Freezing on the Sapphire (1120) Surface: a Sum-Frequency Generation Study
	M. H. Fawey	Thin lead-oxide films produced by DC pulsed magnetron sputtering as ice nucleation substances for SHG/SFG studies
CARS	Benoît Barviau	Single-Shot 1 kHz CPP fs CARS: Temperature Measurements in High-Pressure Environments
	Dmitrii Kliukin	Cascaded coherent anti-Stokes Raman scattering for high-sensitivity number density determination in the gas phase
	Elodie Lin	Simultaneous multifocus CARS spectroscopy for gases and microscopy
	J. I. Hölzer	Oxygen S-branch Raman linewidth determination in O2-N2 mixtures
	Kevin O' Dwyer	Broadband Coherent Anti-Stokes Raman Spectroscopy as a Platform for Rapid Label-free Cytology
	Ryan Muddiman	Deep Convolutional Neural Network for Non-Resonant Background Removal in Broadband Coherent Anti-Stokes Raman Spectroscopy
	Leonardo Castellanos	Time-domain pure-rotational N2 CARS signal dephasing as a method for determining water vapor concentration in hydrogen flames
Other Raman	Mauro Falconieri	Operation of a Fourier-Transform Impulsive Stimulated Raman Spectrometer with Single Femtosecond Oscillator
	Sofia Umanskaya	Intracavity Stimulated Low-Frequency Raman Scattering
High-order responses in t & f domain	Mihaela Bojan	Laser interaction with microliter droplets containing colloidal solutions
	Mihaela Bojan	Terahertz spectroscopy – a possible technique for the identification in food of azo-food dyes
	Mihaela Bojan	Raman Spectroscopy on Colloidal Solutions Containing Sclerotic Drugs
Other NLO	Anna-Lena Sahlberg	Mid-Infrared Pumped Laser-Induced Gratings in CH4-containing Gas Mixtures
	Johannes Kiefer	Utilizing the Supercontinuum Radiation Generated in a Photonic Crystal Fiber for Attenuated Total Reflection Absorption and Fluorescence Spectroscopy
	Huigang Wang	The noncoincidence phenomenon of polar bonding Stretching in binary mixtures and the introduction of aggregation induced split theory