



**EUROPEAN CONFERENCE ON  
NONLINEAR OPTICAL SPECTROSCOPY**

**2.-5. APRIL 2017**

**Abbe Center of Photonics | Jena | Germany**

## PROGRAM

**SUNDAY, 02.04.2017**

**01:00-03:30 pm** Registration

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**03:30-04:00 pm** Welcome Reception

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**04:00-05:00 pm** **Keynote: New Advances in Molecular Spectroscopic Imaging** // Prof. Ji-Xin Cheng (Purdue University, USA)

**05:00-07:00 PM** WELCOME MIXER WITH SNACKS & DRINKS

**MONDAY, 03.04.17**

**09:00-09:40 am** **Mapping Atomic Motions with Ultrabright Electrons: Realization of the Chemists' Gedanken Experiment** // Invited Speaker  
1: Prof. Dwayne Miller (Max-Planck-Institute for the Structure and Dynamics of Matter, Hamburg, Germany)

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**09:40-10:00 am** **Ultrafast Vibrational Dynamics of Ionic Liquids** // Prof. Arnulf Materny (Jacobs University Bremen, Germany)

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**10:00-10:20 am** **Unraveling the electronic states of the copper dimer using nonlinear optical spectroscopy** // Martin Beck (Paul Scherrer Institut, Villigen, Switzerland)

**10:20-10:40 AM** COFFEE BREAK

**10:40-11:20 am** **Towards an all-purpose laser excitation tool for multimodal nonlinear microscopy** // Invited Speaker : Prof. Marcus Motzkus (University of Heidelberg, Germany)

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**11:20-11:40 am Multimodal CARS-imaging for interspecies monitoring of the injured nervous system** // Dr. Ortrud Uckermann (University Hospital Dresden, Germany)

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**11:40-12:00 pm Biomedical applications of coherent Raman microscopy** // Dr. Tobias Meyer (Leibniz Institute of Photonic Technology, Jena, Germany)

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**12:00-01:00 PM LUNCH**

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**01:00-01:40 pm Fluid analysis by laser-induced gratings in the mid- and near-infrared** // Invited Speaker 3: Prof. Johannes Kiefer (University of Bremen, Germany)

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**01:40-02:00 pm Rotational CARS for simultaneous thermometry and relative concentration measurements of ethane and nitrogen in ethane diffusion flames** // Ali Hosseinnia (Lund University, Sweden)

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**02:00-02:20 pm Single-shot temperature measurements at 1 kHz in a methane / air premixed flame using chirped probe pulse femtosecond CARS** // Benoit Barviau (CORIA, University of Rouen, France)

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**02:20-02:40 pm Stimulated Raman Scattering MICOscopy for Catalysis Research** // Dr. Maarten Roeffaers (Catholic University of Leuven, Belgium)

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**02:40-03:10 PM COFFEE BREAK**

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INDUSTRY SESSION

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**03:10-03:30 pm Design and manufacturing of reliable ultrafast lasers using HALT/HASS protocols** // Peter Vogt (Coherent Inc., Frankfurt, Germany)

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**03:30-03:50 pm High-Speed ASOPS System based on 1 GHz repetition rate lasers** // Dr. Andreas Isemann (Laser Quantum GmbH, Konstanz, Germany)

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**03:50-04:10 pm Differentiating Charged From Non-Charged Ferroelectric Domain Walls in  $\text{LiNbO}_3$  by  $\mu$ -CARS and  $\mu$ -Raman: surprising results** // Dr. Toni Beckmann (Soliton GmbH, Gilching, Germany)

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**04:10-04:30 pm In vivo multimodal CARS and multiphoton imaging of human skin with a highly flexible tomograph** // Prof. Karsten König (JenLab GmbH, Jena, Germany)

**04:30-06:30 PM POSTER SESSION WITH BEER & PRETZELS**

**TUESDAY, 04.04.17**

**09:00-09:40 am Fiber-based sources for bio-medical imaging** // Invited Speaker 4: Prof. Jens Limpert (Institute of Applied Physics, Jena, Germany)

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**09:40-10:00 am Optimised synchronisation of solid-state lasers for enhanced contrast in femtosecond SRS microscopy** // Dr. Sarah Saint-Jalm (University of Exeter, UK)

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**10:00-10:20 am Photonic Time Stretch for Broadband Stimulated Raman Scattering** // Daniele Viola (Polytechnic University of Milan, Italy)

**10:20-10:40 AM COFFEE BREAK**

**10:40-11:20 am Solvent mediated vibrational coherence decay: Excited state dynamics study using ultrafast Raman loss spectroscopy** // Invited Speaker 5: Prof. Siva Umopathy (Indian Institute of Science, Bangalore, India)

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**11:20-11:40 am** **Novel strategies for the fast, accurate, and quantitative extraction of resonant vibrational responses from CARS spectra** // Dr. Andreas Volkmer (University of Stuttgart, Germany)

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**11:40-12:00 pm** **Modeling linear chirp effects in coherent anti-Stokes Raman scattering** // Dr. Michele Marrocco (ENEA Rome, Italy)

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**12:00-01:00 PM** **LUNCH**

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**01:00-01:40 pm** **Ultrafast spectrochronography and high-harmonic spectroscopy with ultrashort pulses in the mid-infrared** // Invited Speaker 6: Prof. Aleksei Zheltikov (Moscow State University, Russia)

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**01:40-02:00 pm** **Broadband Fourier-Transform Stimulated Raman Scattering at 20-MHz Modulation** // Antonio Perri (Polytechnic University of Milan, Italy)

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**02:00-02:20 pm** **Multimodal Nonlinear Microscope by a Compact Fiber-Laser System** // Dr. Vikas Kumar (Polytechnic University of Milan, Italy)

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**02:20-02:40 pm** **Detection of environmental microplastics with stimulated Raman scattering (SRS) microscopy** // Liron Zada (VU Amsterdam, Netherlands)

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**02:40-03:00 pm** **Stimulated Raman based microtomography of microfossils for paleoclimate reconstruction approaches** // Christian Steuwe (Catholic University of Leuven, Belgium)

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**03:00-03:30 PM** **COFFEE BREAK**

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**03:30-09:00 pm** **Tour at Leuchtenburg Castle and Conference Dinner at Historic Restaurant**

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## WEDNESDAY, 05.04.17

**09:00-09:40 am Applications of Ultrashort XUV Pulses** // Invited Speaker 7: Prof. Marc Vrakking (Max Born Institute Berlin, Germany)

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**09:40-10:00 am XUV – Time Resolved Four Wave Mixing With A Free Electron Laser** // Dr. Gregor Knopp (Paul Scherrer Institute, Villigen, Switzerland)

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**10:00-10:20 am Super-resolved Raman Spectra of Pure Silicon** // Dr. Dror Malka (Institute of Technology Holon, Israel)

## 10:20-10:40 AM COFFEE BREAK

**10:40-11:00 am Coherent Raman Scattering for Agrochemical Research & Development** // Nicholas Gaunt (University of Exeter)

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**11:00-11:20 am Laser fluorescence method in diagnostics of chronic tonsillitis** // Alina Timurzieva (University Hospital Dresden, Germany)

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**11:20-11:40 am SERS and SE-CARS micro-spectroscopy for high-throughput multiplex immunoassays** // Dr. Rabah Mouras (University of Limerick, Ireland)

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**11:40-12:00 pm The Theory of Surface Enhanced Hyper Raman Scattering** // Dr. Aleksey Polubotko (Ioffe Physical-Technical Institute, Saint Petersburg, Russia)

## 12:00-12:20 PM CLOSING REMARKS & FAREWELL