



# ALT'19

**INTERNATIONAL CONFERENCE**  
**Advanced Laser Technologies**



## Programme Book

**Prague, Czech Republic**



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15-20 September 2019



## PLZEŇ HALL

11:00 - 12:45

**Session Title** [THZ-I] THZ PHOTONICS I  
**Session Chair** J.Hebling

11:00

### THz-I-1

**[Keynote] Charge carrier transport in nanomaterials probed in the THz range**

P. Kuzel<sup>1</sup>, H. Nemeč<sup>1</sup>

<sup>1</sup>Institute of Physics of the Czech Academy of Sciences, THz spectroscopy group, Prague, Czech Republic

11:25

### THz-I-2

**[Invited] Time and spectrally resolved gain dynamics in THz quantum cascade lasers**

J. Darmo<sup>1</sup>, G. Derntl<sup>1</sup>, D. Theiner<sup>1</sup>, G. Scalari<sup>2</sup>, M. Beck<sup>2</sup>, J. Faist<sup>2</sup>, K. Unterrainer<sup>1</sup>

<sup>1</sup>Photonics Institute, TU Wien, Campus Gusshausstrasse, 1040 Vienna, Austria

<sup>2</sup>Institute of Quantum Electronics, ETH Zürich, Auguste-Piccard-Hof 1, Zurich, 8093, Switzerland

11:45

### THz-I-3

**[Invited] THz Quantum Cascade Lasers: Materials Evaluation and Optimization**

H. Detz

<sup>1</sup>TU Wien, Center for Micro- and Nanostructures, Wien, Austria

<sup>2</sup>Brno University of Technology, Central European Institute of Technology, Brno, Czechia

12:05

### THz-I-4

**[Invited] Advanced control of complex matter by high-field terahertz pulses**

F. Giorgianni<sup>1</sup>

<sup>1</sup>Paul Scherrer Institut, Research with Neutrons and Muons, Villigen PSI, Switzerland

12:25

### THz-I-5

**[Invited] Long wavelength stimulated emission in HgTe/CdHgTe quantum well heterostructures**

A. Dubinov<sup>1,2</sup>, V. Gavrilenko<sup>1,3</sup>, V. Romyantsev<sup>1,3</sup>, M. Fadeev<sup>1,4</sup>, V. Utochkin<sup>1</sup>, V. Aleshkin<sup>1,3</sup>, N. Mikhailov<sup>5,6</sup>, S. Morozov<sup>1,2</sup>, Z. Krasilnik<sup>1,2</sup>, C. Sirtori<sup>7</sup>

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<sup>2</sup>Lobachevsky State University, Radiophysics department, Nizhny Novgorod, Russian Federation

<sup>3</sup>Lobachevsky State University, Advanced School of General and Applied Physics, Nizhny Novgorod, Russian Federation

<sup>4</sup>L2C- UMR CNRS 5221- Montpellier University, Terahertz Spectroscopy Group, Montpellier, France

<sup>5</sup>A.V. Rzhanov Institute of Semiconductor Physics- Siberian Branch of Russian Academy of Sciences, Lab #15, Novosibirsk, Russian Federation

<sup>6</sup>Novosibirsk State University, Physics department, Novosibirsk, Russian Federation

<sup>7</sup>Laboratoire de Physique de l'Ecole Normale Supérieure, Physique Quantique et Dispositifs QUAD, Paris, France