

## Tuesday, October 09th 2018 (House of Science Bremen/Downtown)

08:00	- 08:50	Registration
08:50	- 09:00	Opening and welcome, Thomas Frauenheim
<b>Session:</b>		<b>Theory of defects I+II</b> <i>Chair: Peter Deák</i>
09:00	- 09:40	Alfredo Pasquarello, Swiss Federal Institute of Technology, Lausanne, (Switzerland) <i>Limitation to p doping in GaN due to self-compensation</i>
09:40	- 10:20	Chris G. Van de Walle, University of California, Santa Barbara (USA) <i>First-principles studies of transport and optical properties in sesquioxides</i>
10:20	- 10:50	Coffee Break
10:50	- 11:30	Su-Huai Wei, Beijing Computational Science Research Center, (China) <i>Band structure engineering and doping control of transparent conducting oxides</i>
11:30	- 12:10	Shengbai Zhang, Rensselaer Polytechnic Institute, Troy, New York, (USA) <i>A time-dependent density functional theory molecular-dynamics prediction of non-radiative recombination at the DX center of GaAs:Si</i>
12:10	- 12:15	Group photo
12:15	- 14:00	Lunch Break (Restaurant Q1) and Coffee
<b>Session:</b>		<b>Growth and characterization</b> <i>Chair: Klaus Irmscher</i>
14:00	- 14:40	Martin Eickhoff, University of Bremen (Germany) <i>MBE growth of metastable gallium oxide polymorphs</i>
14:40	- 15:20	Jonathon P. Cottom, University College London (UK) <i>The effect of amorphisation on the electronic structure of oxides</i>
15:20	- 15:50	Coffee Break <i>Chair: Michael J. Stavola</i>
15:50	- 16:30	Manfred Martin, RWTH Aachen University (Germany) <i>Gallium oxide-from defects in beta-Ga<sub>2</sub>O<sub>3</sub> to amorphous, highly nonstoichiometric alpha-GaO<sub>x</sub></i>
16:30	- 17:10	Johan Lauwaert, Ghent University, (Belgium) <i>Discriminating defects and device responses in capacitance spectroscopic methods</i>
19:00	- 21:30	Welcome Reception (Bremen Town Hall)

## Wednesday, October 10th 2018 (House of Science Bremen/Downtown)

<b>Session:</b>		<b>Gallium-nitrides, -oxides and -sulfides I</b> <i>Chair: Chris G. Van der Walle</i>
09:00	- 09:40	Oliver Bierwagen, Paul Drude Institute, Berlin (Germany) <i>The transition of defect-related unintentional conductivity from In<sub>2</sub>O<sub>3</sub> towards Ga<sub>2</sub>O<sub>3</sub></i>
09:40	- 10:20	Hans Jurgen von Bardeleben, Sorbonne University, Paris (France) <i>Gallium vacancy defects in beta-Ga<sub>2</sub>O<sub>3</sub>: a combined electron paramagnetic resonance and theory study</i>
10:20	- 10:50	Coffee Break <i>Chair: Joel B. Varley</i>
10:50	- 11:30	Walter R. L. Lambrecht, Case Western Reserve University, Cleveland, Ohio (USA) <i>Defects in ZnGeN<sub>2</sub>, an analog of GaN: the dominance of cation antisites</i>
11:30	- 12:10	Christopher A. Sutton, Fritz Haber Institute of the Max Planck Society, Berlin, (Germany) <i>New stable oxides</i>
12:10	- 14:00	Lunch Break (Restaurant Q1) and Coffee
<b>Session:</b>		<b>CIGS I+II</b> <i>Chair: Suhuai Wei</i>
14:00	- 14:40	Malgorzata Igalska, Warsaw University of Technology (Poland) <i>Photocurrent and capacitance spectroscopy for defect characterization in CIGS</i>
14:40	- 15:20	Susanne Siebentritt, University of Luxembourg, Belvaux (Luxembourg) <i>Defects in CuGaSe<sub>2</sub> and CuInSe<sub>2</sub>: experiment versus theory</i>
15:20	- 15:50	Coffee Break <i>Chair: Stefan Lany</i>
15:50	- 16:30	Zhi Zeng, Institute of Solid State Physics, Chinese Academy of Sciences, Hefei (China) <i>Defect level to intermediate band in Ga-based semiconductor</i>
16:30	- 17:10	Hannu-Pekka Komsa, Aalto University, Espoo, (Finland) <i>Light vs heavy alkali metal impurities in CIGS solar cells</i>
17:10	- 17:50	Emilio Nogales Diaz, Complutense University of Madrid (Spain) <i>Cr as emitting dopant in beta-Ga<sub>2</sub>O<sub>3</sub> for widely tunable optical microcavities</i>
18:40		Bus Pickup to Conference Dinner (Pickup Venue: Radisson Blue Hotel Bremen, Wachtstraße)
19:00	- 22:30	Conference Dinner (Juergenshof)

## Thursday, October 11th 2018 (House of Science Bremen/Downtown)

<b>Session:</b>		<b>Gallium-nitrides, -oxides and -sulfides II</b> <i>Chair: Zhengbai Zhang</i>
09:00	- 09:40	Klaus Irmscher, Leibniz Institute for Crystal Growth, Berlin (Germany) <i>Doping and defects in beta-Ga<sub>2</sub>O<sub>3</sub></i>
09:40	- 10:20	Michael J. Stavola, Lehigh University, Bethlehem, Pennsylvania (USA) <i>Structure and vibrational properties of OH-centers in beta-Ga<sub>2</sub>O<sub>3</sub></i>
10:20	- 10:50	Coffee Break
10:50	- 11:30	Joel B. Varley, Lawrence Livermore National Laboratory, California (USA) <i>Defects and charge localization in Ga-oxides and sulfides</i>
11:30	- 12:10	Peter Deák, University of Bremen, (Germany) <i>Intrinsic carrier trapping and luminescence in beta-Ga<sub>2</sub>O<sub>3</sub></i>
12:10	- 13:30	Lunch Break (Restaurant Q1) and Coffee
<b>Session:</b>		<b>CIGS II</b> <i>Chair: Susanne Siebentritt</i>
13:30	- 14:10	Martin Feneberg, Otto von Guericke University, Magdeburg (Germany) <i>Influence of many-body effects on optical properties of III-Nitrides</i>
14:10	- 14:50	Susan Schorr, Helmholtz Center for Materials and Energy, Berlin (Germany) <i>A structural perception of intrinsic point defects in CIGS</i>
14:50	- 15:30	Darius Kuciauskas, National Renewable Energy Laboratory, Golden, Colorado (USA) <i>Optical metastability in CuInGa(Se)<sub>2</sub> solar cells</i>
15:30	- 16:10	Christoph Lienau, University of Oldenburg (Germany) <i>Coherent manipulation of single and dipole-coupled quantum dots in GaAs-based nanostructures</i>
17:25		Poster Mounting
17:30	- 21:00	Poster Session and Catering Buffet

## Friday, October 12th 2018 (House of Science Bremen/Downtown)

<b>Session:</b>		<b>Phases and extended defects</b> <i>Chair: Thomas Frauenheim</i>
09:00	- 09:40	Stephan Lany, National Renewable Energy Laboratory, Golden, Colorado (USA) <i>Defect phase diagrams for wide gap and photovoltaic semiconductors</i>
09:40	- 10:20	Dirk Lamoen, University of Antwerpen, Antwerp (Belgium) <i>Structure and electronic properties of defects at grain boundaries in CIGS</i>
10:20	- 10:50	Coffee Break
10:50	- 11:30	Karsten Albe, Technical University of Darmstadt (Germany) <i>First-principles calculations on dislocation-point defect interactions in Cu(In,Ga)Se<sub>2</sub> solar cells absorbers</i>
11:30	- 12:10	Michael Lorke, University of Bremen (Germany) <i>Carbon in GaN revisited</i>
12:10	- 12:20	Closing remarks: Thomas Frauenheim

### Conference Organisers

Thomas Frauenheim	University of Bremen, Germany BCCMS <a href="http://www.bccms.uni-bremen.de/cms/people/t-frauenheim/">http://www.bccms.uni-bremen.de/cms/people/t-frauenheim/</a>
Peter Deák	University of Bremen, Germany BCCMS <a href="http://www.bccms.uni-bremen.de/cms/people/p-deak/">http://www.bccms.uni-bremen.de/cms/people/p-deak/</a>
Klaus Irmscher	Leibniz Institute for Crystal Growth/IKZ, Berlin Adlershof, Germany <a href="https://www.ikz-berlin.de/en/research1/simulation-charakterisation/physical-characterization">https://www.ikz-berlin.de/en/research1/simulation-charakterisation/physical-characterization</a>
Susanne Siebentritt	University of Luxembourg Laboratory for Photovoltaics <a href="http://staff.uni.lu/susanne.siebentritt">http://staff.uni.lu/susanne.siebentritt</a>
Joel B. Varley	Lawrence Livermore National Laboratory, California, US Center for Interface Science and Catalysis <a href="https://qsg.llnl.gov/jvarley.html">https://qsg.llnl.gov/jvarley.html</a>

<http://www.bccms.uni-bremen.de/veranstaltungen/2018/cecam-ccdny/>

