

## Workshop Advanced Material Sciences 2017

### Wednesday, 20 September

17:00 Arrival Leibniz Institute of Polymer Research Dresden (IPF), Introduction of IPF

17:30–18:30 Visit of labs of IPF

18:30 – 20:30 **Networking Reception (Max Bergmann Center of Biomaterials Dresden)**

### Thursday, 21 September

9:00–9:15 **Greetings**

- Prof. Dr.-Ing. Matthias Kleiner, President, Leibniz Association
- Dr. Michinari Hamaguchi, President, Japan Science and Technology Agency (JST)

#### **Session I: Photonics and Engineering of Photoluminescent Materials**

Chairs: Prof. Dr. Thomas Schröder (IHP), Prof. Kenichi Ishikawa (The University of Tokyo)

9:15–10:50 (4 speakers)

11:20–12:55 (4 speakers)

- Dr. Tobias Schulz (IKZ): “InGaN structure at the atomic scale - correlation to optical properties“
- Prof. Dr. Oliver G. Schmidt (IFW): „Nano- and quantum photonics with membranes and dots “
- Prof. Giovanni Capellini (IHP): “Tensile strained Ge as active gain medium for Si CMOS compatible lasers”
- Prof. Dr. Mikhail Ivanov (MBI): “High harmonic generation spectroscopy of ultrafast phase transitions in strongly correlated solids”
  
- Dr. Masahiro Nakano (Osaka University): Development of a genetically encoded thermometer
- Prof. Kenichi Ishikawa (The University of Tokyo): Ab initio strong field physics
- Prof. Akira Oiwa (Osaka University): Photon-spin Poincaré interface using electron spins in quantum dots
- Prof. Motoaki Iwaya (Meijo University): Current status and expectation of AlGaN UV lasers

14:00 – 14:15 Anne Schmitz (DFG): “Funding Possibilities for German-Japanese Research”

#### **Session II: Polymers, Nano Science and Photonics**

Chairs: Prof. Dr. Brigitte Voit (IPF), Dr. Takashi Uemura (Kyoto University)

14:15–15:50 (4 speakers)

16:15–17:50 (4 speakers)

- Prof. Dr. Andreas Fery (IPF): “Plasmonic materials made from nanoparticles assembly”
- Prof. Dr. Brigitte Voit (IPF): “Polymers for Optoelectronic Applications”
- Prof. Dr. Martin Möller (DWD): “Light driven microgel objects – motion out of equilibrium”
- Dr. Camelia Miron (INP): "Structural modification of fluorescent polymer nanocomposites treated by plasma in liquids for electroluminescent devices"
  
- Dr. Yumoto (Kyoto University): “Lead-halide perovskites: a new solution-processed semiconductor for photonics”
- Dr. Takashi Uemura (Kyoto University): “Polymer Chemistry in Coordination Nanospaces”.
- Dr. Takane Imaoka (Tokyo Institute of Technology): “Monodisperse macromolecular metal complexes: A new pathway to atom-precise clusters”
- Dr. Kei Saito (Monash University): "Photo-responsive Dynamic Polymers and Their Applications"

19:30 – 22:00 Dinner (Restaurant Körnergarten)

Friday, 22 September

**Session III:** *(Nano)measurement technologies, including Terahertz range*

Chairs: Prof. Dr. Volker Deckert (IPHT), Prof. Akira Furusawa (The University of Tokyo)

9:00–10:35 (4 speakers)

11:00–12:15 (3 speakers)

- Dr. Dana Cialla-May (IPHT): “Surface enhanced Raman spectroscopy (SERS) in bioanalytical and biomedical applications“
- Prof. Dr. Norbert Esser (ISAS): “Raman at interfaces “
- PD Dr. Karsten Hinrichs (ISAS): “Optofluidik and Nanopolarimetry: IR detection of molecular interfaces and interactions“
- Prof. Dr. Volker Deckert (IPHT): “Nanoscale spectroscopy”
  
- Prof. Akira Furusawa (The University of Tokyo): “Hybrid quantum information processing: A way for large-scale optical quantum information processing”
- Dr. Tomohiro Amemiya (Tokyo Institute of Technology): “Optical metamaterials for advanced photonic devices”
- Dr. Masaya Notomi (Nippon Telegraph and Telephone Corporation): “Integrated Nanophotonics for Optical Computation”

12:15–13:20 Lunch

13:20–14:20 Review & General Discussion

14:20–14:30 Closing remarks

Departure IPF

15:30–17:30 Sight Seeing Tour in Dresden

**Posters:**

- Dr. Petra Pötschke (IPF): “Polymer nanocomposites for thermoelectric applications”
- Dr. Katja Fricke (INP): “Thin Plasma Polymer Films for Biosensor Applications”