

Materials Day

am 5. März 2020 von 9:15 Uhr bis 16:00 Uhr

Aula, FTU, KIT Campus Nord

Agenda:

9:15 - 9:30	Welcome Oliver Kraft
9:30 - 9:50	Welcome and general information to the Materials Day <ul style="list-style-type: none"> • Jury evaluating the short scientific talks of the young scientists • Ranking of the proposed new subjects Wolfgang Wenzel
9:50 - 10:10	Post Lithium Storage (POLiS) Cluster of Excellence Christian Punckt
10:10 - 10:30	3D Matter Made to Order (3DMM2O) Cluster of Excellence Jan Gerrit Korvink
10:30 - 11:00	Networking coffee – Poster session
11:00 - 11:20	Virtual Materials Design: Challenges and Opportunities Wolfgang Wenzel
11:20 - 11:40	Helmholtz-Programm in POF IV Horst Hahn
11:40 - 12:00	Short scientific talks: Senior scientists
11:40 - 11:50	Environmentally-friendly Biomimetic Materials Hendrik Hölscher
11:50 - 12:00	Large-scale film deposition of “quantum materials” (by spin-coating) for the development of new quantum circuits Matthieu Le Tacon
12:00 - 13:00	Lunch - Poster Session
13:00 - 14:40	Short scientific talks: Young scientists
13:00 - 13:10	Electron microscopic investigation of iron-based superconducting thin films Lukas Grünewald
13:10 - 13:20	SURMOFs for Optoelectronics Ritesh Haldar

13:20 - 13:30	Foam Templating – A Computer-Aided Route to Tailor-Made Porous Materials Jana Holland-Cunz
13:30 - 13:40	Automated material characterization: a role for magnetic resonance Anastasiya Kolchynska
13:40 - 13:50	How Sulphur can help solving the global challenges? Ksenia Kutonova
13:50 - 14:00	Beyond Perovskite Solar Cells Tobias Leonhard
14:00 - 14:10	Programmable DNA Materials for Life Science Applications Carmen Martinez-Dominguez
14:10 - 14:20	Inkjet-Printed Sensors for Life-Science Applications Lisa Petani
14:20 - 14:30	Highly conductive, stretchable and printable inks for soft electronics Hongye Sun
14:30 - 14:40	Hierarchically structured porous bodies from capillary suspension Moritz Weiß
14:40 - 15:00	Jury deliberation on the short scientific talks - Votum - Announcement of the results Contribution of the KIT Materials Center to a conference attendance
15:00 - 16:00	Discussion of the proposed potential future scientific topics - Poster Session
15:50 - 16:00	Ranking (in plenum), Summary <u>Proposed future scientific topics:</u> 1. Programmed materials synthesis 2. Nano/Micro structured polymers 3. Metadata model/Materials simulation/Modelling 4. High-throughput, parallel NMR 5. Catalytic active monoliths 6. The cell nucleus as a biomimetic inspiration for DNA-based computer hardware 7. Cavity-enhanced spectroscopy

Posters:

1	Patrick Bitterwolf	Programmable, self-assembling enzyme hydrogels for the production of chemicals
2	Miriam Botros	High-entropy materials for energy storage applications
3	Ka Chun Chan	Simulation and modelling of 3D Printing
4	Samer Daradkeh	Outward diffusion through protective alumina scale on FeCrAl-Alloys by means of atom prob tomography
5	Sedghamiz Elaheh	Materials simulation and modelling toward more directional 3D printing
6	Heike Fliegl	Innovation Platform MaterialDigital
7	Stefan Fritz	Optimization of the structural properties of Al/AlO _x /Al-layer systems for Josephson junctions
8	Dirk Fuchs/Matthieu Le Tacon	Large-scale film deposition of “quantum materials” for the development of new quantum circuits
9	Thomas Gietzelt	Laser Welding and Diffusion Bonding in Micro System Engineering
10	Hartmut Gliemann	Application of surface-anchored metal-organic frameworks for improving the performance of sensor devices
11	Ritesh Haldar	Excited state dynamics in SURMOFs
12	Christoph Herrmann	A research data infrastructure for materials science
13	Yong Hu	Programmable DNA-Silica-Carbon Nanotube composite materials for biotechnology
14	Liane Koker	Environmental Monitoring with Smart Degradable Printed Systems
15	Ivan Kondov	SimLab NanoMicro: Computer simulation bridging the scales
16	Meike König	Advanced Materials via Chemical Vapor Deposition Polymerization
17	Dario Mager	Nano 3D printer for material research
18	Felix Manger	Eco-friendly solar cell fabrication using organic nanoparticle dispersions
19	Hatice Mutlu	The toolbox of the Soft Matter Synthesis Laboratory (SML)
20	Martin Peng	Thermotolerant catalytic biomaterials for additive manufacturing
21	Roshan Prizak	Activity-dependent adjustment of DNA packing density compartmentalizes the biological cell nucleus
22	Tobias Schlöder	Virtual Materials Design at KIT
23	Alexander D. Schulz	Ferroelectricity of MAPbI ₃ and its implications for solar energy conversion
24	Simon Schweidler	High-entropy materials – concept and applications
25	Salome Vargas Ruiz	Structuring of bicontinuous microemulsions on planar surfaces