

Particle-Based Materials Symposium 2023

Thursday, 5 th October, 2023			
9.00	Welcome address <i>Prof. Dr. Georg Garnweitner</i> <i>TU Braunschweig, GER</i>	13.00	KEYNOTE Design and discovery of plasmonically active particle-based materials <i>Prof. Dr. Emilie Ringe</i> <i>University of Cambridge, GBR</i>
9.15	KEYNOTE Design of particulate products: From synthesis to color <i>Dr. Lukas Pflug</i> <i>FAU Erlangen-Nürnberg, GER</i>	SESSION: PLASMONIC SYSTEMS	
SESSION: ASSEMBLY		13.25	Selective nitridation of ceramic open cell foams for efficient photothermal heating <i>Dr. Michael Maas</i> <i>University of Bremen, GER</i>
9.40	Shape matters: Tuning the self-assembly of colloidal cube superstructures <i>Dr. Janne-Mieke Meijer</i> <i>Eindhoven University of Technology, NED</i>	13.40	4D printing of a magnetic and plasmonic object by DLP <i>Amélie Pérot</i> <i>Sorbonne University, FRA</i>
9.55	Defined core-shell particles as the key to complex interfacial self-assembly <i>Jack Eatson</i> <i>University of Hull, GBR</i>	13.55	Studying plasmonic response with electron energy-loss spectroscopy: Substrate effect is observed in experiment and reproduced in simulations <i>Alexander Kichigin</i> <i>FAU Erlangen-Nürnberg, GER</i>
10.10	Nanocube assembly à la carte <i>Muhammad Luthfi Fajri</i> <i>Aix-Marseille University, FRA</i>	14.10	3D printing of rigid photonic particles <i>Pauline Pradal</i> <i>EPFL Lausanne, SUI</i>
10.25	Tuning the morphology of boron carbide by optimizing sol-gel processing conditions: From polyhedral-equiaxed to nanowires <i>Dr. Suna Avcioglu</i> <i>TU Istanbul, TUR</i>	14.25	Photocatalysis and photosensitization using ultra-small metal nanoparticles for solar energy harvesting and conversion <i>Dr. Yu Wang</i> <i>HU Berlin, GER</i>
10.40	Coffee Break	14.40	Coffee Break
SESSION: SOFT MATTER		SESSION: PRINTING	
11.00	Regioselective seeded polymerization in block copolymer nanoparticles: Controlling shape, morphology and chemical functionality <i>Prof. Dr. Daniel Klinger</i> <i>Freie Universität Berlin, GER</i>	15.00	Imprinted metal grids as transparent electrodes: Performance of gold nanowires versus nanoparticles <i>Dr. Thomas Kister</i> <i>Leibniz Institute for New Materials, GER</i>
11.15	Morphology-determined total internal reflection of light by microscale Janus colloids <i>Dr. Bradley Frank</i> <i>Max Planck Institute of Colloids and Interfaces, GER</i>	15.15	Influence of process parameters during ultrasonic atomization on particle properties of metal powders <i>Vanessa Fronk</i> <i>Anton Paar GmbH, GER</i>
11.30	Modular, multifunctional microswimmers from toposelective nanoparticle attachment (TNA) and understanding their 3D dynamics <i>Maximilian Bailey</i> <i>ETH Zürich, SUI</i>	15.30	Magnetic thin films with tuneable characteristics via combination of different nanoparticle building blocks <i>Marion Görke</i> <i>TU Braunschweig, GER</i>
11.45	Amphiphilic nanogels as versatile stabilizers for pickering emulsions <i>Ruiguang Cui</i> <i>Freie Universität Berlin, GER</i>	15.45	Reversible low-temperature sintering of nanostructured silver microparticles for sustainable printed electronics <i>David van Impelen</i> <i>Leibniz Institute for New Materials, GER</i>
12.00	Lunch Break	16.00	POSTERSESSION (End: 17.30)
		19.30	Conference Dinner

Friday, 6th October, 2023

9.00	KEYNOTE Porous materials made by confined self-assembly of colloids for catalysis and photonics <i>Prof. Dr. Marco Faustini</i> <i>Sorbonne University, FRA</i>	13.00	KEYNOTE Nanoparticles meet automation <i>Dr. Sofia Dembski</i> <i>Fraunhofer Institute for Silicate Research, GER</i>
SESSION: POROUS MATERIALS AND GELS		SESSION: CHARACTERIZATION	
9.25	Bottom-up patterning of self-assembled cracks in colloidal films <i>Fanny Thorimbert</i> <i>Sorbonne University, FRA</i>	13.25	Influence of magnetic nanoparticle interactions of iron oxide based polydimethylsiloxane composites on magnetism and electromagnetic induction heating <i>Theodor Raczka</i> <i>FAU Erlangen-Nürnberg, GER</i>
9.40	Versatile synthesis of nanocrystal-based gels with nanoscopic properties <i>Dr. Irene Morales Casero</i> <i>Leibniz University Hannover, GER</i>	13.40	PAT4Nano: Real time particle size monitoring during processing for improved quality of nanosuspensions <i>Luc Leufkens</i> <i>TNO, NED</i>
9.55	Photocatalytic benefits of semiconductor nanoparticle-based gel structures <i>Jakob Schlenkrich</i> <i>Leibniz University Hannover, GER</i>	13.55	Caterpillar polymer nanoparticles: Using pattern recognition as a tool to analyze electron microscopy images of complex particles <i>Gabriel Monteiro</i> <i>University of Konstanz, GER</i>
10.10	Coffee Break	14.10	Electron and x-ray tomography of crystal defects in colloidal supraparticles <i>Dr. Benjamin Apeleo Zubiri</i> <i>FAU-Erlangen-Nürnberg, GER</i>
SESSION: APPLICATIONS		14.25	Coffee Break
10.30	Synthesis and characterization of inorganic phosphate-based supraparticles as coating components for bone implants <i>Anika Höppel</i> <i>University of Würzburg, GER</i>	SESSION: SUPRAPARTICLES	
10.45	Drug loaded conjugated polymer nanoparticles for the treatment of hepatocellular carcinoma <i>Sarah Spiewok</i> <i>University of Ulm, GER</i>	14.45	Suprabeads for catalysis: Making supraparticles applicable in continuous gas-flow reactors <i>Thomas Zimmermann</i> <i>FAU Erlangen-Nürnberg, GER</i>
11.00	Electrofluids based on multiwalled carbon nanotubes for soft joints <i>Sergio Lago-Garrido</i> <i>Leibniz Institute for New Materials, GER</i>	15.00	Evaporation-driven formation of supraparticles composed of spherical and ellipsoidal building blocks <i>Melis Yetkin</i> <i>Max Planck Institute for Polymer Research, GER</i>
11.15	Electrostatic separation of nanoplastics from wastewater <i>Amna Abdeljaoued</i> <i>Evonik Operations GmbH, GER</i>	15.15	Understanding particle segregation in bidisperse suspension droplets during spray drying using CFD-DEM simulations <i>Silas Wolf</i> <i>TU Braunschweig, GER</i>
11.30	Silicon nanoparticles from a pilot-scale hot-wall reactor for Li-ion batteries: Control of morphology and upscaling <i>Moritz Loewenich</i> <i>University of Duisburg-Essen, GER</i>	15.30	Simulation of layer formation during crystallization of supraparticles in spherical confinement <i>Federico Tomazic</i> <i>FAU Erlangen-Nürnberg, GER</i>
11.45	Si/C supraparticles for improved lithium-ion battery anodes: Routes towards their preparation, stabilization and characterization <i>Dr. Fatih Özcan</i> <i>University of Duisburg-Essen, GER</i>	15.45	Farewell & Award Ceremony (End: 16.15)
12.00	Lunch Break		

Postersession

<p>Autoclave synthesis and post-autoclave treatment of rare earth-doped NaGdF₄ particles for enhanced luminescence and single-particle cathodoluminescence <i>Dr. Bogdan Semenenko</i> <i>TU Braunschweig, GER</i></p>	<p>Biofunctionalized gold-polythiophene hybrid nanoparticles for electrochemical biosensing <i>Muniba Shahzad Bhatti</i> <i>Leibniz Institute for New Materials, GER</i></p>
<p>Colloidal stability of nonpolar gold nanoparticles: Role of functional additives <i>Tobias Knapp</i> <i>Leibniz Institute for New Materials, GER</i></p>	<p>Cycling stability of carbon-based elastomer composites for stretchable sensors <i>Lingyu Iiu</i> <i>Leibniz Institute for New Materials, GER</i></p>
<p>Entropic trapping in icosahedral colloidal supraparticles by spherical confinement <i>Jonathan Martín González</i> <i>FAU Erlangen-Nürnberg, GER</i></p>	<p>Fabrication of supraparticles via membrane emulsification <i>Dr. Naveen Kumar P. M.</i> <i>FAU Erlangen-Nürnberg, GER</i></p>
<p>Formation process and mechanical properties of gels formed from ultrathin gold nanowires <i>Yannic Curto</i> <i>Leibniz Institute for New Materials, GER</i></p>	<p>Inkjet-printed composites of sinter-free, electrically conductive gold-polythiophene hybrid nanoparticles and polyvinyl alcohols <i>Michael Alexander Horst Klos</i> <i>Leibniz Institute for New Materials, GER</i></p>
<p>Interfacial self-assembly of SiO₂-PNIPAM core-shell particles with varied crosslinking density <i>Maret Ickler</i> <i>FAU Erlangen-Nürnberg, GER</i></p>	<p>Investigation of the photocatalytic activity of metal oxide nanoparticle-based gel structures <i>Frederike von der Haar</i> <i>Leibniz University Hannover, GER</i></p>
<p>Lithium-ion battery cell identification with magnetic supraparticles <i>Sara Li Deuso</i> <i>FAU Erlangen-Nürnberg, GER</i></p>	<p>Manufacturing and characterization of particle-based silica aerogels for pharmaceutical applications <i>Jennifer Pierick</i> <i>TU Braunschweig, GER</i></p>
<p>Mass vs. Diameter – A new approach for analyzing particle size and structure <i>Dr. Franz Friebe</i> <i>femtoG AG, SUI</i></p>	<p>Particle-based Al-doped ZnO (AZO) thin films: Tunable properties for transparent conducting oxide applications <i>Dr. Sherif Okeil</i> <i>TU Braunschweig, GER</i></p>
<p>Preparation, characterization and selective laser sintering – Powder bed fusion – Processing of biodegradable composite powders <i>Frederic Rudlof</i> <i>FAU Erlangen-Nürnberg, GER</i></p>	<p>Properties and prospects of magnetic assemblies <i>Larissa Schoske</i> <i>Leibniz University Hannover, GER</i></p>
<p>Scale-bridging tomography workflow for 3D characterization of supraparticles used in nanoparticle chromatography applications <i>Alexander Götz</i> <i>FAU Erlangen-Nürnberg, GER</i></p>	<p>Short-chained catechol derivate as surface coating for water transfer of magnetic nanoparticles with different morphologies <i>Christoph Wesemann</i> <i>Leibniz University Hannover, GER</i></p>
<p>Synthesis and characterization of aluminium-doped zinc oxide nanocrystals from the benzylamine controlled sol-gel process <i>Guohui Yang</i> <i>KIT, GER</i></p>	<p>The influence of the building block morphology on the photoelectrochemical properties of nanoparticle-based assemblies <i>Pia Thomsen</i> <i>Leibniz University Hannover, GER</i></p>
<p>The influence of W doping on the crystallization of VO₂(M) within hydrothermal synthesis <i>Kimberly Timmers</i> <i>TNO, NED</i></p>	