

# NanoCarbon Annual Conference 2020

Presentations • Short Pitches • Posters • Exhibits



Program

March 3 and 4, 2020

Balthasar-Neumann-Saal, Würzburg

Cluster  
Nanotechnology

NETWORK  
NANOCARBON

— TUESDAY, MARCH 3 —

- 09:00 Registration
- 09:30 P. Grambow, Nanoinitiative Bayern GmbH, Germany  
**Opening remarks and short introduction of the Network NanoCarbon**

## SESSION 1: ENERGY STORAGE

- 09:45 P. Boulanger, NAWATEchnologies, France  
**Challenges for future energy storage technologies and the benefit of nanotechnologies**
- 10:20 C. Rogier, Thales Research&Technology/University of Cergy-Pontoise, France  
**Electrodeposition of metal oxides on spray-coated nanostructured carbon framework as high performance electrode material for asymmetric pseudocapacitors**
- 10:40 D. Nemeč, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany  
**Digital data collection and inline quality control by machine learning during the continuous manufacturing process of electrode pastes for Li-ion batteries**
- 11:00 D. Eitel, Technische Hochschule Nürnberg Georg Simon Ohm, Germany  
**Correlation of carbon content and electrical conductivity of nanomaterials for PEM fuel cells**
- 11:20 O. B. Fernandez, OCSiAI S.a.r.l., Luxembourg  
**The use of nanocarbons in energy storage systems**
- 11:40 P. Pötschke, Leibniz Institute of Polymer Research Dresden e.V. (IPF), Germany  
**Development of PVDF-based conducting polymer films for bipolar batteries**

## SHORT PITCHES

- 12:00 T. Hickmann, Eisenhuth GmbH & Co. KG, Germany  
**Metal coating of electrically conductive polymer composite films**
- 12:05 B. Krause, Leibniz Institute of Polymer Research Dresden e.V. (IPF), Germany  
**Innovative polymer-based composite systems for high-efficient energy scavenging and storage**

- 12:10 L. Ferrara, Politecnico di Milano, Italy  
**Upgrading the concept of UHPC to ultra high durability concrete through nanoparticles addition**
- 12:15 F. Heinrich, Technische Hochschule Wildau, Germany  
**Network „Graphen“ - topics, challenges and requests**
- 12:20 Poster session/lunch break

## SESSION 2: COMPOUNDS AND COMPOSITES, PROCESSING

- 13:40 I. Kolaric, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany  
**Historical overview on CNTs and graphene**
- 14:15 B. Zanghelli, University of Natural Resources and Life Sciences, Austria  
**Different routes of carbon nanotubes dispersions**
- 14:35 V. K. Wisniewski, Hamburg University of Technology, Germany  
**The challenges of an industrial scale-up of CNP-masterbatches - from particle model to in-line monitoring of a three roll mill dispersion process**
- 14:55 M. Liebscher, Technical University Dresden, Germany  
**Synthesis and dispersion of P- and N-Type MWCNTs for thermoelectric cementitious nanocomposites**
- 15:15 Poster session/coffee break

## SESSION 3: SMART LIVING

- 15:45 R. Borchardt, Friedrich-Alexander University Erlangen-Nürnberg, Germany  
**Thermoelectric generators made of tailored carbon allotropes**
- 16:05 R. Neuhaus, Institute of Industrial Manufacturing and Management, University Stuttgart, Germany  
**CNT-actuators for adaptive building skins - Update on potentials and limitations**
- 16:25 R. Molteni, Allod GmbH, Germany  
**Flexible materials with PTC effect**

- 16:45 M. Heise, Forschungsinstitut für Leder und Kunststoffbahnen (FILK), Germany  
**CNT containing polymers as a game changer for flexible active lighting textiles**
- 17:05 B. Münzing, The Sixth Element (Changzhou) Material Technology Co., Ltd., China  
**Heat dissipation with graphene**
- 17:25 End of the first day

#### EVENING EVENT MARCH 3 – WINE TASTING AND DINNER

- 18:30 Meeting point Frankonia Brunnen, Residenz  
**Wine tasting and conference dinner**

#### WEDNESDAY, MARCH 4

- 08:00 Poster session/coffee

#### SESSION 4: WORK SAFETY/RECYCLING/END OF LIFE STRATEGIES

- 08:30 M. Ata, Zeon Corp., Japan  
**The chemical- and bio-degradation of CNTs as an essential and necessary data for life cycle management over production, use and waste of CNTs**
- 09:05 D. Söthje, Technische Hochschule Aschaffenburg & Technische Hochschule Nürnberg Georg Simon Ohm, Germany  
**Recycling of carbon fiber reinforced epoxy resins**
- 09:25 D. Kehren, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin, Germany  
**Release of respirable fibrous dust from carbon fibers due to splitting along the fiber axis**
- 09:45 O. Creutzenberg, Fraunhofer-Institut für Toxikologie und Experimentelle Medizin ITEM, Germany  
**Toxicological characterisation of graphenes and functionalised MWCNTs - results of in vitro and in vivo investigations**
- 10:05 L. Neumeister, Berufsgenossenschaft Energie, Textil, Elektro, Medienerzeugnisse, Germany  
**TRGS 527 Risk assessment for nanomaterials**

- 10:25 G. v. Kerckhove, OCSIAL Europe S.a.r.l., Luxembourg  
**HSE regulatory status of TUBALL™**

- 10:45 Poster session/coffee break

#### SESSION 5: NEW APPLICATIONS

- 11:30 T. Schubert, TH Köln, Germany  
**CO<sub>2</sub> separation by means of mixed matrix materials based on nano-carbon materials**
- 11:50 N. Kchit, Nanocyl S.A., Belgium  
**3D Printing of CNT-based electrically conductive nanocomposites by fused deposition molding**
- 12:10 T. Weidauer, Ostbayerische Technische Hochschule Regensburg, Germany  
**Electrocatalytical reduction of CO<sub>2</sub> to ethanol**
- 12:30 R. Dümpelmann, Inolytix AG, Switzerland  
**Surface properties of graphenes, carbon blacks and carbon fibers by IGC**
- 12:50 L. Lugo, Universidade de Vigo, Spain & M. Buschmann, Institut für Luft- und Kältetechnik Dresden, Germany  
**Graphene nanofluids though different heat pipes**
- 13:10 Poster award
- 13:20 Lunch break and end of the conference

#### POSTERS AND ACCOMPANYING EXHIBITION

In addition to the lecture program there will be a poster award as well as an accompanying exhibition. Posters can be submitted until **January 31, 2020**, both online and by sending them to [info@nanocarbon.net](mailto:info@nanocarbon.net).

Manufacturers of materials and equipment have the opportunity to present their demonstrators and products in an **accompanying exhibition**. Please find further information online.

#### PROFILE OF THE CONFERENCE

For the 6th time the Network NanoCarbon\* invites to the Annual Conference in Würzburg, Germany. The event offers an open forum to the nanocarbon community for exchanging results and ideas. It is the most important communication platform for innovative and commercial activities in the field of carbon nanomaterials within Germany and beyond.

This year, international speakers will present current applications and the industrialisation of nanocarbons. The Annual Conference particularly addresses industry delegates seeking new trends and partners for cooperations.

\*In the open Network NanoCarbon national and international partners work closely together to develop innovative nanocarbon products for the market.

#### CONFERENCE VENUE

**Balthasar-Neumann-Saal**  
Dreikronenstraße 31  
97082 Würzburg/Germany

**Directions:** <https://www.bns-wuerzburg.de/anfahrt/-/parken>

#### CONFERENCE FEES – EARLY BIRD PRICES

Two-day conference with evening event on March 3:  
**Conference dinner with wine tasting.**

Industry delegates	395 €
Members of the Nanonetz Bayern e.V.	235 €
Institutes / authorities	235 €
Members of the Network NanoCarbon	190 €
Students	95 €

(Notes: Prices are subject to VAT. The fees include conference documents, coffee breaks, lunch breaks, refreshments and the conference dinner. For registrations after February 10, 2020 a surcharge of 20 % will be due. In case of withdrawal after February 10, 2020, cancellation fees of 50 % of the respective prices are due. Organiser: Nanoinitiative Bayern GmbH.)

#### REGISTRATION AND FURTHER INFORMATION

Registration is open until February 19, 2020. Please find all further information as well as the online registration form at: <http://carbon2020.nano.bayern>

#### ORGANISATION/CONTACT

**Nanoinitiative Bayern GmbH/Cluster Nanotechnology**

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