

NanoCarbon Annual Conference 2023

Presentations • Short Pitches • Posters • Exhibits

Program

March 14 and 15, 2023

Felix-Fechenbach-Haus, Würzburg

Cluster
Nanotechnology



— TUESDAY, MARCH 14 —

- 09:00 Registration and check-in
- 10:00 P. Grambow, Nanoinitiative Bayern GmbH, Germany
Opening remarks and short introduction of the Network NanoCarbon

SESSION 1: NANOCOMPOSITES

- 10:10 C. Bechteler, University of Oxford, UK
Processing and properties of CNT / alumina-composites
- 10:30 D. Söthje, Technische Hochschule Nürnberg Georg Simon Ohm, Germany
Improved properties of carbon composites by enhancing of intermolecular interactions
- 10:50 T. Mader, Fulcoline GmbH & Co. KG, Germany
Non-flammable, heated lightweight component for battery temperature control in electric vehicles
- 11:10 E. Inci, Leibniz-Institut für Polymerforschung Dresden e.V., Germany
Development of aqueous electrode inks based on PANI / carbon composite materials
- 11:30 Poster session / networking / coffee break

SESSION 2: SHORT PITCHES

- 12:00 B. Krause, Leibniz-Institut für Polymerforschung Dresden e.V., Germany
Project introduction: BiPoLiS - Development of lithium-sulphur bipolar batteries
- 12:10 J. Schuhmacher, SCHOTT AG, Germany
Glass-based carbonnanotubes & graphene composites
- 12:20 U. Helbig, Technische Hochschule Nürnberg Georg Simon Ohm, Germany
Application of carbon doped titanate nanotubes in membrane electrode assemblies
- 12:30 J. Heldt, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany
Development of shape-changing membranes by bucky-gel actuator arrays
- 12:40 T. Schubert, Technische Hochschule Köln, Germany
Project proposal: Recycling of nanocarbon based composites

- 12:50 U. Staudinger, Leibniz-Institut für Polymerforschung Dresden e.V., Germany
Development of MWCNT / block copolymer nanocomposites for electrical and sensory applications

13:00 Poster session / networking / lunch break

SESSION 3: ENERGY STORAGE AND CONVERSION I

- 14:00 K. Retz, NAWAAmerica, USA
Vertically aligned carbon nano tubes enabling multifunctional composite structures for energy applications
- 14:20 D. Eitel, Technische Hochschule Nürnberg Georg Simon Ohm, Germany
Carbon-doped TiO₂ as catalyst support for PEM fuel-cells
- 14:40 J. Sygusch, Helmholtz Institute Freiberg for Resource Technology, Germany
Recycling of spheroidized graphite from spent lithium ion batteries
- 15:00 P. Boulanger, NAWATechnologies, France
Copper substrate coated with VACNT for lithium batteries anodes
- 15:20 Poster session / networking / coffee break

SESSION 4: SAFETY AND REGULATION

- 16:00 E. Penssler, Yordas GmbH, Germany
Nanosafety – where is the journey heading?
- 16:20 N. Hashizume, Resonac Corporation, Japan
Multi-walled carbon (nano)tubes, contribution to the EU Green Deal
- 16:40 M. Sekiya, Zeon Corporation, Japan
For safer use of CNTs
- 17:00 C. Sottili, Nanocyl, Belgium
Recyclability of thermoplastic polymers containing carbon nanotubes: technical and HSE aspects
- 17:20 End of the first conference day

EVENING EVENT — CONFERENCE DINNER

- 18:45 Meeting point **Würzburger Hofbräu Keller**
Jägerstraße 17, 97082 Würzburg
- 19:00 **Beer tasting with conference dinner (~ 3 hours)**

08:30 Poster session / coffee

SESSION 5: ANALYTICS

- 09:00 T. Peters, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin BAuA, Germany
Quantification and morphological analysis of nanofibres for material characterisation purposes using SEM and advanced image processing
- 09:20 V. Raza, Surface Measurement Systems, UK
Evaluating battery materials at realistic conditions: impact of high temperature and high humidity
- 09:40 P. Fortugno, University of Duisburg-Essen, Germany
Thermal analysis for the characterisation of plasma synthesised carbon allotropes
- 10:00 C. Geers, NanoLockin GmbH, Switzerland
Lock-in thermography for quality control and on-line analysis
- 10:20 Poster session / networking / coffee break

SESSION 6: SENSORS

- 11:00 M. Heise, FILK Freiberg Institute gGmbH, Germany
Digital printing of polymer-CNT dispersions for pressure sensitive sensors
- 11:20 I. Kolaric, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany
Smart steel: Novel CNT graphene primer for active corrosion protection and predictive maintenance
- 11:40 I. Arief, Leibniz-Institut für Polymerforschung Dresden e. V., Germany
Carbon nanotube-based natural rubber composites for smart applications: toward self-healable piezoresistive sensors
- 12:00 Poster session / networking / lunch break

SESSION 7: ENERGY STORAGE AND CONVERSION II

- 13:00 P. Pötschke, Leibniz-Institut für Polymerforschung Dresden e.V., Germany
Experimental and computational analysis of thermoelectric modules based on melt-mixed polymer-carbon nanotube composites

- 13:20 H. Uchida, Zeon Corporation, Japan
Development of thermoelectric devices and IOT sensing system with CNT sheet
- 13:40 G. Karalis, Technische Universität Dresden, Germany & University of Ioannina, Greece
Large-scale thermal energy harvesting by multi-functional building materials: from proof-of-concept studies towards civil engineering constructions
- 14:00 Poster award / closing remarks
- 14:15 Get-together / coffee break / open end

NETWORK MEETING

- 14:45 Status meeting of the **Network NanoCarbon**
- 15:30 End of the event



POSTERS AND EXHIBITION

In addition to the lecture program there will be a poster award as well as an accompanying exhibition. Posters can be submitted until **February 20, 2023**, either online or by sending information about title and authors to 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 at carbon2023.nano.bayern.

PROFILE OF THE CONFERENCE

For the 8th time the Network NanoCarbon will organise the Annual Conference. During the two-day event, experts from industry and research come together to exchange their results and ideas using this open communication and networking platform. Join the talk about innovative and commercial activities in the field of carbon nanomaterials (CNTs, graphenes, carbon black). The Annual Conference also addresses industry delegates seeking new trends and partners for cooperations and projects. **Join us and meet the nanocarbon specialists.**



CONFERENCE VENUE

Felix-Fechenbach-Haus
Gutenbergstr. 11
97080 Würzburg/Germany

CONFERENCE FEES — EARLY BIRD PRICES¹

Two-day conference with conference dinner and beer tasting on March 14, 2023:

Industry delegates	525 €
Network members ² / institutes / authorities	295 €
Members of the Network NanoCarbon	255 €
Students	110 €
Students (without conference dinner)	65 €

(Notes: 1 Prices are subject to VAT. The fees include conference documents, coffee breaks, lunch breaks, refreshments and the conference dinner. All rates are early bird prices. For registrations after February 14, 2023 a surcharge of 20% will be due. In case of withdrawal after February 14, 2023, cancellation fees of 50% of the respective prices are due. In case of withdrawal after March 07, 2023, cancellation fees of 100% of the respective prices are due. Organiser: Nanoinitiative Bayern GmbH 2 Networks NanoSilber, nanoInk, NanoAnalytik, Nano4eMob, NanoGeoTherm and Nanonetz Bayern e.V.)

REGISTRATION

To participate in the event, please **register online until March 07, 2023**. Further information as well as the registration form can be found at: carbon2023.nano.bayern

ORGANISATION / CONTACT

Nanoinitiative Bayern GmbH / Network NanoCarbon
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Program information as at March 9, 2023.