

# The 9th NanoCarbon Annual Conference

Presentations — Short Pitches  
Posters — Exhibits

MARCH 19 - 20, 2024

Felix-Fechenbach-Haus  
Würzburg, Germany

# PROGRAM

Tuesday, March 19

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

## SESSION 1: REGULATION AND SUSTAINABILITY

- 10:10 M. Ata, Zeon Corporation, Japan  
Uncertainty in nano material innovation using CNTs as a case example  
10:30 C. Sottili, Nanocyl, Belgium  
Effect of mechanical recycling on thermoplastic-CNT composites  
10:50 M. Sekiya, Zeon Corporation, Japan  
Material innovation and the possibility of chemical information data sharing  
11:10 V. Bachmann, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin BAuA, Germany  
Protection of workers against carcinogenic fibre dusts – A Risk Management Option Analysis  
11:30 Poster session / networking / coffee break

## SESSION 2: SHORT PITCHES

- 12:00 I. Kolarić, C. Glanz, D. Nemeč, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany  
A new perspective on risk management of Carbon Nanotubes  
12:10 U. Helbig, Technische Hochschule Nürnberg Georg Simon Ohm, Germany  
New Characterization Methods for Nanomaterials and Composites at TH Nürnberg  
12:20 L. Häublein-González, S. Reinemann, Thuringian Institute for Textile and Plastics Research (TITK), Germany  
Carbon-based materials as functional additives for cast polyamides  
12:30 B. Münzing, BePaMü GmbH, Germany  
Towards the Green Energy transition with Graphene  
12:40 T. Vasuthevan, VEMS Technologies GmbH, Germany  
High conductive Graphene application for EV in Germany

- 12:50 A. Byrne, N. Unger, IBB Netzwerk GmbH, Germany  
Small fibres, Big impact – Bio(nano)materials in the BIOMAC Open Innovation Test Bed  
13:00 Poster session / networking / lunch break
- ## SESSION 3: PROCESSING AND COMMERCIALISATION
- 14:00 I. Kolarić, C. Glanz, D. Nemeč, Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany  
Carbon Nanotubes Additives in Batteries  
14:20 T. Goislard, NAWA Technologies, France  
Transferred Vertically Aligned Carbon Nanotubes  
14:40 M. Lesti, G. Lemahieu, M. Sentis, G. Brambilla, Microtrac Retsch GmbH, Germany  
A new method to find the ideal solvent or solvent mix for graphene dispersions: The Hansen Approach  
15:00 S. Bohm, Imperial College London, UK  
Graphene industrial application towards decarbonization  
15:20 Poster session / networking / coffee break
- ## SESSION 4: THERMOELECTRIC MATERIALS
- 16:00 M. Liebscher, G. Karalis, V. Mechtcherine, Technische Universität Dresden, Germany  
Structural Thermoelectric element generators based on Geopolymer concrete via Molecularly doped Carbon nanotube filaments  
16:20 M. Heise, K. Trommer, N. Gräßler, S. Hampel, N. Perez, FILK Freiberg Institute gGmbH & Leibniz Institute for Solid State and Material Research Dresden, Germany  
Digital printing of n- and p-doped CNT-polymer composites for flexible Peltier coolers  
16:40 J. Heier, Empa, Switzerland  
High Grade Electronic Graphene Inks  
17:00 B. Krause, P. Pötschke, Leibniz-Institut für Polymerforschung Dresden e.V., Germany  
Flexible thermoelectric TPU/carbon nanotubes composites  
17:20 End of the first conference day
- ## EVENING EVENT – CONFERENCE DINNER
- 18:45 Meeting point: fountain in the park of Stiftung Juliusspital Würzburg  
Juliuspromenade 19, 97070 Würzburg  
19:00 Wine tasting with conference dinner (~ 3h)

Wednesday, March 20

08:30 Poster session / coffee

SESSION 5: ENERGY STORAGE AND TRANSFORMATION

- 09:00 H. Uchida, Zeon corporation, Japan  
Development of IOT/Energy harvesting sensing device and total solution with CNT sheet
- 09:20 H. Beheshti, Nanocyl, Belgium  
Application of Nanocyl CNTs in the Development of High-Performance Li-Ion Battery Electrodes
- 09:40 D. Eitel, Technische Hochschule Nürnberg Georg Simon Ohm, Germany  
Core-shell TiO<sub>2</sub>/graphitic carbon nanoparticles with temperature dependent graphitic layer spacing
- 10:00 Poster session / networking / coffee break

SESSION 6: ANALYTICS

- 10:40 F. Friebel, femtoG AG, Switzerland  
Mass and density of CNTs – and what it means for size analyses
- 11:00 P. Sharma, A. Bilican, W. Schmidt, L. Kopietz, C. Weidenthaler, Max-Planck-Institut für Kohlenforschung & Fraunhofer UMSICHT, Germany  
Synchrotron tomography for ex-situ characterization of carbon-polymer composite bipolar plates for vanadium redox flow batteries
- 11:20 N. Leborgne, Adscientis, France  
Surface properties of CNTs and carbonaceous materials by dynamic gas adsorption of 14+ molecular probes
- 11:40 A. Kondor, J. Sandbrink, A. Vanderbruggen, M. Rudolph, D. Burnett, A. Garcia, Surface Measurement Systems Ltd., UK & Helmholtz-Institute Freiberg for Resource Technology, Germany  
Investigation of battery materials
- 12:00 Poster session / networking / lunch break

SESSION 7: DEGRADATION OF CARBON NANOTUBES

- 13:00 S. Takahashi, Nagoya University, Japan  
Biodegradation of carbon nanotubes 1: Contribution of the Fenton reaction to the CNT degradation by enzymes

- 13:20 K. Hori, Nagoya University, Japan  
Biodegradation of carbon nanotubes 2: Long-term continuous CNT degradation by a bacteria-driven Fenton reaction
- 13:40 J. Sousa, International Iberian Nanotechnology Laboratory (INL), Portugal  
Degradation of carbon nanotubes using Photo-Fenton reaction
- 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 23, 2024**, either online or by sending information about title and authors 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 at [carbon2024.nano.bayern](http://carbon2024.nano.bayern).

Profile of the conference

For the 9th 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 prices<sup>1</sup>

Two-day conference with conference dinner and wine tasting on March 19, 2024:

Industry delegates	525€
Network members <sup>2</sup> / 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 20, 2024 a surcharge of 20% will be due. In case of withdrawal after February 20, 2024, cancellation fees of 50% of the respective prices are due. In case of withdrawal after March 12, 2024, 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 12, 2024**. Further information as well as the registration form can be found at: [carbon2024.nano.bayern](http://carbon2024.nano.bayern)

Organisation / contact

Nanoinitiative Bayern GmbH / Network NanoCarbon  
[www.nanoinitiative-bayern.de](http://www.nanoinitiative-bayern.de)

Contact: J. Süß  
Phone: +49 931 31 - 89370  
E-mail: [jasmin.suess@nanoinitiative-bayern.de](mailto:jasmin.suess@nanoinitiative-bayern.de)

Program information as at January 10, 2024