

June 2020



Materials Chain International Conference 2021

3rd Materials Chain International Conference

MCIC 2021: Materials Discovery and Processing for Energy



Dear members of the Materials Chain,

due to the Corona pandemic, the Materials Chain conference originally planned for November 2020 will be postponed: **The next Materials Chain International Conference, MCIC 2021, will take place from February 25 to 26, 2020. Please save the date!**

The conference titled "**MCIC 2021: Materials Discovery and Processing for Energy**" will deal with the following topics:

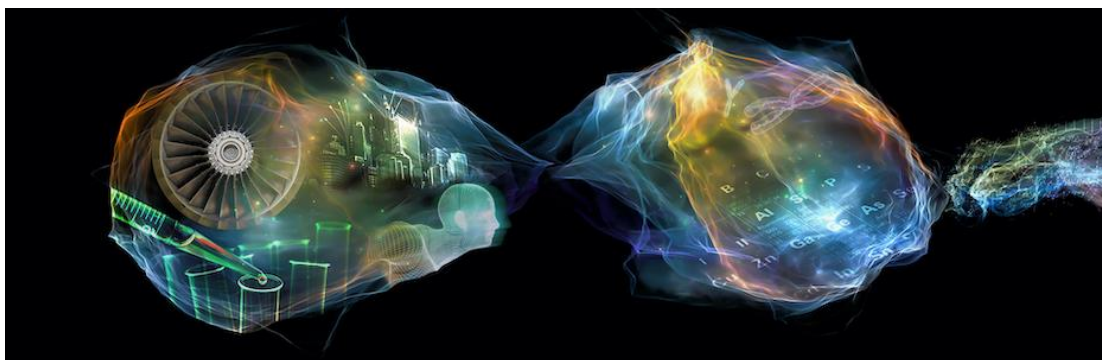
- **Data-driven and combinatorial materials discovery**
- **Materials for physical energy conversion, 2D and hybrid functional materials**
- **Materials for chemical energy conversion**
- **Magnetic materials for energy conversion**
- **Metals and alloys**
- **Production engineering and additive manufacturing**
- **Transfer: Start-ups and Systems**

Further information will follow in due time.

Please feel free to forward this note to interested colleagues at your institute and beyond.

Remodeled Member's Area accessible again

After thorough reconstruction for a more user-friendly experience, the [internal member's area](#) on our website is up and running again. You can access the area using your institutional e-mail address and your formerly used password. In case you forgot your password, you can easily generate a new one [here](#). Via the member's area, you have access to everything Materials Chain including internal documents, useful material, pictures from previous events and more. In case of questions, problems or requests, e.g. if you want to change personal data of your personal profile page, you can use the contact form provided online.



Latest News

Evolution Underground

Did life originate not on the ground but underground? Scientists at University of Duisburg-Essen (UDE) have substantiated their theory that first life could have begun deep in the earth's crust. In their experiments, structures that were inanimate developed survival strategies within a short time.

[More](#)



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An Exceptional Cobalt Compound

In the search for small but stable cobalt compounds, an international team has discovered an exciting complex for materials research that has not been seen for almost 50 years.

A research team from the Ruhr-Universität Bochum (RUB) and Carleton University in Ottawa has produced a novel, highly versatile cobalt compound.

[More](#)



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New Insights into the Energy Levels in Quantum Dots

Researchers have experimentally proven the theoretically predicted Auger effect in quantum dots. The findings help

to understand the structures that could form the basis of quantum communication.

Researchers from Basel, Bochum and Copenhagen have gained new insights into the energy states of quantum dots.

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DLR_School_Lab is Online

The DLR_School_Lab at the TU Dortmund University goes online. At the end of June, Prof. Metin Tolan from the Faculty of Physics enriched the offer of the School Lab with an approximately one-hour film about the infinite vastness of the universe. Tolan's contribution will be included in the nationwide offering of the 13 DLR_School_Labs.

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TU Dortmund

Awards

Dies academicus 2020

Dr. Vi Tran from University of Duisburg-Essen (UDE) was awarded for the best doctorate in 2019 in the Faculty of Chemistry. She was a PhD student in the working group of Materials Chain member Prof. Sebastian Schlücker. This year, the Dies academicus could not take place in front of an audience as usual, so congratulations were sent to the winners by video.

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Project Nominated for EU-Award

They are printable, flexible and do not require a chip: Radio labels based on silicon nanoparticles from the NanoEnergieTechnikZentrum (NETZ) at University of Duisburg-Essen (UDE). They were developed in the "DruIDe" project, which is led by four UDE engineers. DruIDe has now been nominated for the EU "REGIO STARS 2020" award. The final decision is made by online voting.

[More](#)



Publication Highlights

Enhanced dissolution of silver nanoparticles in a physical mixture with platinum nanoparticles based on the sacrificial anode effect

Breisch, M. and Loza, K. and Pappert, K. and Rostek, A. and Rurainsky, C. and Tschulik, K. and Heggen, M. and Epple, M. and Tiller, J.C. and Schildhauer, T.A. and Köller, M. and Sengstock, C.
Nanotechnology 31 (2020)

[more](#)

Thermodynamic modelling of the Ni–Zr system

BJana, A. and Sridar, S. and Fries, S.G. and Hammerschmidt, T. and Kumar, K.C.H.
Intermetallics 116 (2020)

[more](#)

Random walk methods for Monte Carlo simulations of Brownian diffusion on a sphere

Novikov, A. and Kuzmin, D. and Ahmadi, O.
Applied Mathematics and Computation 364 (2020)

[more](#)

[See all publications](#)

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