

PRESS RELEASE

Berlin, August 13, 2019 - 4<sup>th</sup> Hybrid Materials and Structures 2020 - Call for Abstracts

## 4<sup>th</sup> Hybrid Materials and Structures 2020 28 - 29 April 2020, Karlsruhe, Germany

### More than the sum of their parts!

Very often, innovative materials act as trailblazers for the introduction of new technologies and products. Hybrid materials and structures made or joined from several individual components are playing an increasingly important role in the industrial applications of mechanical engineering and construction.

"**Hybrid Materials and Structures 2020**" covers the entire spectrum of topics, from basic materials to design, from production to application, and thus provides the basis for an in-depth understanding of application-specific material and component behavior. The only limitation is the focus on material combinations that perform structural tasks in some way.

Special Session: "Intrinsic Hybrid Composites"

In multi-material design, hybrid composites joined by downstream processes such as bonding or welding are already established, but often do not fully exploit the lightweight potential. An intrinsic hybrid composite, however, is an integral component in which the various materials are joined in the consolidation or forming process of the metal- or plastic-based component. Hybrid 2020 is dedicating a special session to these material systems.

The conference offers a diverse mix of short talks, poster presentations and poster forums. In addition, the interdisciplinary exchange between science and industry will enable extended networking among the participants.

A DFG priority programme on intrinsic hybrid composites and a German-Canadian graduate school on hybrid fibre composites, the Karlsruhe Institute of Technology (KIT) is home of two major research collaborations dedicated to this class of materials. This also applies to numerous industrial companies, especially from the automotive and supplier industries, and non-university research institutions in the Karlsruhe technology region.

We are looking forward to welcoming you in Karlsruhe!

The following matters will be discussed:

#### B Basics

- Material compatibility and interface properties
- Residual stresses, ageing and corrosion

#### C Characterization

- Materialography and microanalytical investigations
- Mechanical testing
- Non-destructive testing and quality assurance

#### D Design and layout

- Material modelling and simulation
- Construction methods and design principles
- Stress analysis

#### **M Manufacturing**

- Manufacturing and processing
- Joining techniques, machining and finishing

#### **O Operation**

- Corrosion and corrosion protection
- Maintenance and repair
- Life cycle assessments and recycling

#### **Special Topic "Intrinsic Hybrid Composites"**

In particular young scientists are very welcome to actively contribute to the conference by submitting an abstract. To submit your abstract, please click [here](#).

Chair of the conference are

- Prof. Dr.-Ing. Joachim M. Hausmann, Institute for Composite Materials (IVW), Kaiserslautern
- Prof. Dr.-Ing. Marc Siebert, PFH - Private University of Applied Sciences Göttingen
- Dr.-Ing. Axel von Hehl, Leibniz Institute for Materials Engineering - IWT, Bremen
- Prof. Dr.-Ing. Kay André Weidenmann, Institute for Materials Resource Management, University of Augsburg

**Abstract submission deadline: 01<sup>st</sup> November 2019**

Further information about the conference

[https://hybrid2020.dgm.de/home/?pk\\_campaign=Portal2](https://hybrid2020.dgm.de/home/?pk_campaign=Portal2)

Words: 461 // Characters: 2,957

#### **About Deutsche Gesellschaft für Materialkunde e.V. (DGM) / German Materials Society**

The German Materials Society / Deutsche Gesellschaft für Materialkunde e. V. ([www.dgm.de](http://www.dgm.de)), founded in 1919, is the largest scientific and technical society in the field of materials science and engineering in Germany. The DGM represents the interests of its members ensuring continuous development in the field of materials science and engineering with regard to content, structure and human resources. Furthermore, individual members, companies and universities are part of DGM. The involvement and promotion of young material scientists and engineers at an early stage is one of the central issues to which DGM applies itself. The spectrum of services for the support and development of young people includes excursions, young DGM local groups, forums, career workshops, academies as well as special publications or alumni meetings.

DGM organises more than 40 continuous training courses with over 600 participants annually. Over 2300 people attend the annual DGM conferences and more than 2500 experts actively participate in 70 technical and working committees of DGM. Therefore, DGM contributes to the transfer of knowledge, the continuous exchange and networking in the field of materials science and engineering.

For further information about DGM and its activities please contact:

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