

Preface

Materials are the key to innovation. The development of new materials forms the basis of international competitiveness in the industry. More than 30% of the gross domestic production (e.g. in Germany pointing out the relevance) is related to the materials sector.

Composite materials and compounds contribute significantly to the development of new products. Combining materials with totally different properties gives rise to diverse opportunities for the tailored design of products. High-level research carried out in the field of composite materials increases this potential and secures not only the steady development of the materials sector but also of the whole manufacturing industry.

The “22nd Symposium on Composites”, held in the science city of Kaiserslautern, Germany, from June 26-28, 2019, brings together researchers from different scientific institutions and technology companies to present and discuss the latest developments and trends in all kinds of composites. Since the establishment of the University of Kaiserslautern, materials play a major role in research and education. Moreover, for almost three decades composite materials provide one of the most important research topics in Kaiserslautern.

The series of symposia on composites have become a popular forum for a wide range of composite related topics such as polymer, metal and ceramic matrix composites, hybrid structures and materials, coatings, manufacturing technologies, testing and simulation, smart materials, bio composites and recycling. The corresponding proceedings have been reviewed by the scientific committee of this symposium and are published in this transcript to provide a sustainable knowledge base.

This conference was organized by the “Gemeinschaftsausschuss Verbundwerkstoffe (GAV)” within the “Deutsche Gesellschaft für Materialkunde e.V. (DGM)” in cooperation with the “Institut für Verbundwerkstoffe GmbH (IVW)” and the University of Kaiserslautern. The organizing scientific committee of this conference hopes that all participants enjoyed the conference, got new impressions, engaged in inspiring discussions and most of all had a good time in the science city Kaiserslautern.

On behalf of the Scientific Committee

Prof. Dr.-Ing. Joachim M. Hausmann (Chairman of the 22nd Symposium on Composites)

Prof. Dr.-Ing. Guntram Wagner (Chairman of the GAV)

Scientific Committee

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Technische Universität Kaiserslautern

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Friedrich-Alexander-Universität Erlangen-Nürnberg

Prof. Dr.-Ing. Ulf Breuer

Institut für Verbundwerkstoffe GmbH, Kaiserslautern

Dr.-Ing. Henri Cohrt

Carbon Composites e.V., Augsburg

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Technische Universität Wien, Österreich

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Technische Universität Hamburg

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Institut für Verbundwerkstoffe GmbH, Kaiserslautern

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Technische Universität Ilmenau

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Deutsches Zentrum für Luft- und Raumfahrt e.V., Stuttgart

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Universität Bayreuth

Prof. Dr.-Ing. Peter Mitschang

Institut für Verbundwerkstoffe GmbH, Kaiserslautern

Prof. Dr.-Ing. Daisy Nestler

Technische Universität Chemnitz

Prof. Dr.-Ing. Wolfgang Paatsch

Bundesanstalt für Materialforschung und -prüfung, Berlin

Prof. Dipl.-Ing. Dr.-Ing. Ralf Schledjewski

Montanuniversität Leoben, Österreich

Prof. Dr.-Ing. Frank Vollertsen

Bremer Institut für angewandte Strahltechnik GmbH

Prof. Dr.-Ing. Guntram Wagner

Technische Universität Chemnitz

Dr.-Ing. Roland Weiß

Hüttenberg

Dr.-Ing. Bernd Wetzel

Institut für Verbundwerkstoffe GmbH, Kaiserslautern

Prof. Dr.-Ing. Bernhard Wielage

Technische Universität Chemnitz