

Preface

It is a pleasure to introduce this volume devoted to the 11th International Conference on Key Engineering Materials (ICKEM). The 11th International Conference on Key Engineering Materials was organized at the Skolkovo Institute of Science and Technology (Skoltech), Moscow, Russian Federation, on 26-29 March 2021. The ongoing impact of Covid-19 resulted in the prevailing online format being used for this conference.

Established in 2011 in collaboration with MIT, Skoltech is a private university that cultivates new generations of researchers and entrepreneurs, promotes advanced scientific knowledge, and fosters innovative technology to address critical issues facing Russia and the world. Skoltech applies the best Russian and international research and educational practices, with particular emphasis on entrepreneurship and innovation.

Members of the scientific conference committee would like to acknowledge the efforts made by the organizers to ensure the smooth running of the events even at a difficult time. This ensured that the conference proceedings achieved the goal of bringing together interested academics and industry experts in the field of Key Engineering Materials, enabling the enthusiastic and active exchange of ideas.

Special thanks go to Prof. Alexey I. Salimon (Skoltech), who delivered the opening remarks on behalf of the organizer. Our appreciation also goes to the keynote and invited speakers: Prof. Alexander Korsunsky of Trinity College, University of Oxford, UK; Prof. Carsten Gachot of Vienna University of Technology, Austria; Prof. Geoffrey Mitchell of the Institute Polytechnic of Leiria, Portugal; and Prof. Julio Ramirez-Castellanos of Universidad Complutense de Madrid, Spain. Their contributions shared the latest research ideas with all participants, provoking lively discussions that broadened our views and encouraged new directions of research activities, as was evident from the excellent feedback received from all participants.

Despite the inevitable reduction in conference participation caused by difficult circumstances, 38 presentations were chosen from the original 65 submissions. A further selection of 23 full-length papers were subjected to double-blind peer-review and accepted for publication.

The conference organizing committee members extend warm thanks to all technical program committee members and external reviewers for their paper selection and reviewing efforts. The creation of this proceedings volume would not have been possible without their hard work and provision of their time and expertise. This event would not be possible without the support of all our committee members and all our authors, as well as listeners.

We believe that the readers of this volume will find fruitful engagement with the ideas and results presented here that will help sustain their professional advancement in the global context of key engineering materials.

We look forward to welcoming the delegates of ICKEM2022, the next edition in the conference series.

On behalf of the ICKEM2021 Organizing Committee

Alexander M. Korsunsky, Oxford, UK

Julio Ramirez-Castellanos, Madrid, Spain

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