III International Conference and School
«Synthesis, structure, and properties of high-entropy materials»
October 12-14, 2021

Ural Branch of Russian Academy of Sciences
Institute of Metallurgy Ural Branch RAS
Belgorod State National Research University
Institute of Metal Physics Branch RAS
Russian Science Foundation

FIRST CIRCULAR

Dear Colleagues!

We invite you to participate in the work of the conference and school "**Synthesis, structure, and properties of high-entropy materials**", which is planned to be held from 12 to 14 October 2021.

Contributions from the young scientists and professionals, working in the field of materials science, are especially anticipated.

Main topics

- High- and medium-entropy alloys, compositionally complex alloys: fabrication and processing methods, structure, mechanical, and functional properties, phase stability and phase transformations, deformation mechanisms, diffusion and ordering;

- High-entropy and compositionally complex coatings, methods of their production, structure, and properties;

- High-entropy ceramics, methods of their preparation, structure, and properties;

- New compositionally complex materials for technology and medicine, including nanostructured materials, microstructure design of multicomponent materials, practical applications;

- Advanced methods of fabrication and processing of metallic and non-metallic materials for structural and functional applications, including additive technologies, new methods of casting, powder metallurgy, welding, surface treatment;

- Other promising developments of new metallic and non-metallic materials;

- Computer modeling of the behavior of compositionally complex alloys, coatings and ceramics in different conditions.

The school will be supported under RSF grant No. 19-79-30066 "Advanced alloys and technologies for the aerospace industry."

Venue

Institute of Metallurgy, Ural Branch of the Russian Academy of Sciences, 101 Amundsen str., Ekaterinburg, Russia.

Key dates

Until August 1, 2021 - registration and acceptance of abstracts;

By August 15, 2021 - confirmation of participation in the conference;

Until September 1, 2021 - the second circular, the draft of the conference program;

Until October 1, 2021 - the final program of the conference.

Terms of participation

Participation in the conference does not require any fee.

Physical meeting is planned. Due to the unstable epidemiological situation, the conference format can be changed to a virtual or mixed one. For the foreign participants, it is possible to participate in a remote format.

There will be a competition for the best scientific report presented by young scientists. The winners and participants of the competition will be awarded with diplomas and certificates.

The language of the conference is *English* and *Russian*. The abstracts and presentation slides must be in English. A collection of conference abstracts will be published and sent for indexing in the RSCI database (elibrary.ru).

Registration

Registration of participants and submission of abstracts is carried out on the conference website (http://shea.bsu.edu.ru/shea/2021/) until August 1, 2021;

The program committee has sole rights to select abstracts for the conference.

Chairpersons of conference

A.A. Rempel, Academician of the Russian Academy of Sciences, Professor, Doctor of Sciences, Head of the Laboratory and Director, Institute of Metallurgy, RAS Ural Branch;

G.A. Salishchev, Doctor of Sciences, Head of the Laboratory and Professor of the Department of Materials Science and Nanotechnology, Belgorod State National Research University.

Program committee

V.N. Sanin, Doctor of Sciences, Deputy Director of the Merzhanov Institute of Structural Macrokinetics and Problems of Materials Science, RAS;

D.V. Luzgin, Doctor of Sciences, Head of Laboratory, Tohoku University, Japan;

E.A. Trofimov, Doctor of Sciences, Professor of the Department of Materials Science and Physicochemistry of Materials, National Research South Ural State University;

E.G. Astafurova, Doctor of Sciences, Associate Professor, Leading Researcher, Laboratory of Physics of Structural Transformations, Institute of Strength Physics and Materials Science, RAS Siberian Branch;

A.V. Makarov, Corresponding Member of the Russian Academy of Sciences, Doctor of Sciences, Head of the Department of Materials Science and the Laboratory of Mechanical Properties, Institute of Physics of Metals, RAS Ural Branch;

Yu.I. Chumlyakov, Doctor of Sciences, Professor of the Department of Physics of Metals and Head of the Laboratory of Physics of High-Strength Crystals, Siberian Institute of Physics and Technology, National Research Tomsk State University;

Organizing committee

N.S. Kashaev, Ph.D., head of the laboratory, Helmholtz-Zentrum Geesthacht, Germany;

Yu.V. Ivanisenko, Ph.D., head of the group, Karlsruhe Institute of Technology, Germany;

I.V. Kireeva, Doctor of Sciences, Professor of the Department of Physics of Metals and Head of the Laboratory of Physics of High-Strength Crystals, Siberian Institute of Physics and Technology, National Research Tomsk State University;

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I.V. Okulov, Ph.D., Associate Professor, Head of Department Processing of Functional Materials, Leibniz Institute for Materials Engineering – IWT and Ural Federal University;

S.V. Konovalov, Doctor of Sciences, Head of the Department of Metal Technology and Aviation Materials Science and Chief Researcher of the Research Laboratory of Aerospace Materials Science, Samara University;

V.G. Pushin, Doctor of Sciences, Professor, Head of the Laboratory of Nonferrous Alloys, Head of the Department of Electron Microscopy of the Center for Collective Use "Testing Center for Nanotechnologies and Advanced Materials", Institute of Metal Physics, RAS Ural Branch.

Local committee

I.A. Balyakin, Junior Researcher, Laboratory of High Entropy Alloys, Institute of Metallurgy, RAS Ural Branch;

M.S. Tikhonova, Ph.D., Head of the Department and Senior Researcher, Department of Materials Science and Nanotechnology, Belgorod State National Research University;

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