

Preface

2nd International Conference on Non-Ferrous Metals, ICNFM'15, was organized by the Faculty of Non-Ferrous Metals of AGH-University of Science and Technology, Cracow, Committee on Materials Science, Polish Academy of Sciences and Institute of Non-Ferrous Metals in Gliwice with support of the Foundation of Development and Promotion of Science. The aim of the conference was to establish an effective platform for institutions and industries to share ideas of innovative technology and knowledge. The conference covered wide range of topics in the area of materials engineering, metallurgy and metalworking of non-ferrous metals and alloys. Over 100 presentations and 50 posters were presented at the conference from which about 50% was selected to this volume of Key Engineering Materials.

I would like to express gratitude to the organizing and scientific committee, paper reviewers and especially to all participants for their great contribution to the conference success.

I believe that fruitful discussion of the topics presented during the conference will lead to the closer cooperation with respect to research, education and industry.

On behalf of the organizing committee

Prof. Maria Richert

Dean of the Non-Ferrous Metals Faculty
Chairman of the 2nd ICNFM, June 22-24, 2015

Organizing Committee

Chairman

Prof. Maria Richert

Co-Chairmans

Prof. Joanna Karwan-Baczewska

Prof. Wojciech Libura

Prof. Wacław Muzykiewicz

Prof. Stanisław Pietrzyk

Prof. Krzysztof Żaba

Organized by

Faculty of Non Ferrous Metals, AGH University of Science and Technology, Poland

Co-organized by

Committee on Materials Science, Polish Academy of Sciences

Institute of Non Ferrous Metals, Gliwice, Poland

Foundation of Development and Promotion of Science, Cracow, Poland

Scientific Committee

Maria Richert, AGH-University of Science and Technology

Krzysztof Żaba, AGH-University of Science and Technology

Jacek Borowski, AGH-University of Science and Technology

Eduard Cesari, Universitat de les Illes Balears

Andrzej Chmielarz, Institute of Non Ferrous Metals

Andrzej Ciaś, AGH-University of Science and Technology

Aleksandra Czyska-Filemonowicz, AGH-University of Science and Technology

Beata Dubiel, AGH-University of Science and Technology

Henryk Dyja, Czestochowa University of Technology

Władysław Gąsior, Institute of Metallurgy and Materials Science, Polish Academy of Sciences

Marek Hetmańczyk, Silesian University of Technology

Joanna Karwan-Baczewska, AGH-University of Science and Technology

Andrzej Kłyszewski, Institute of Non Ferrous Metals

Marzanna Książek, Foundry Research Institute

Wojciech Libura, AGH-University of Science and Technology

Jerzy Lis, AGH-University of Science and Technology

Jerzy Łabaj, Silesian University of Technology

Piotr Lebkowski, AGH-University of Science and Technology

Wacław Muzykiewicz, AGH-University of Science and Technology

Grzegorz Boczkal, AGH-University of Science and Technology

Magdalena Szutkowska, Pedagogical University of Cracow

Adam Mazurkiewicz, The Institute for Sustainable Technologies

Wojciech Misiołek, Lehigh University

Jarosław Mizera, Warsaw University of Technology

Sören Müller, Technical University of Berlin

Marek Niewczas, McMaster University

Stanisław Pietrzyk, AGH-University of Science and Technology

Zbigniew Rdzawski, Silesian University of Technology

Jan Sieniawski, Rzeszow University of Technology

Jerzy Smolik, The Institute for Sustainable Technologies

Jerzy Józef Sobczak, Foundry Research Institute

Józef Szczepan Suchy, AGH-University of Science and Technology

Romana Śliwa, Rzeszow University of Technology

Zbigniew Śmieszek, Institute of Non Ferrous Metals

Hanna Wiśniewska-Weinert, Metal Forming Institute

Wojciech Szczypiorski, Chief Metallurgist Hazelett Strip Casting Corporation