

Preface

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The European Materials Research Society (E-MRS) Fall Meeting is traditionally held every year at the Warsaw University of Technology in Warsaw, Poland. In 2012, the 11th E-MRS Fall Meeting was held from 17 to 21 September; it included 12 thematic symposia, a plenary session, various satellite events, and the award ceremony of the 2012 Acta Materialia Gold Medal. This award was presented to Professor Terence G. Langdon of the University of Southern California (USA) and the University of Southampton (UK). To mark the occasion, a special Symposium was organized with the title “Recent Developments in the Processing and Properties of Ultrafine-Grained Materials.” The objective of this symposium was to place emphasis on the processing of metals with exceptionally small grain sizes, typically within the sub-micrometer and nanometer ranges, to examine the physical and mechanical properties of these materials and their potential for use in applications and to continue the series of special issues on this subject that have been published in the Journal of Materials Science [1–3].

In recognition of Professor Langdon’s long-term association with the Journal of Materials Science, and especially his continuous membership of the Editorial Advisory Board since 1978, it was decided to publish a selection of papers arising from the symposium in this journal. Accordingly, the papers in this issue are all based on presentations made at the symposium in Warsaw. All papers submitted for this special issue were subjected to the Journal’s usual rigorous review and the accepted papers published herein provide an outstanding description of the

current research and activities within the field of ultrafine-grained materials.

Very special thanks are extended to our colleagues associated with this symposium and the subsequent publication of the papers. It is a pleasure to thank Professor Michael Zehetbauer of the University of Vienna for very capably serving as Chairman of the organizing committee and Professor Malgorzata Lewandowska of Warsaw University of Technology, Professor Witold Lojkowski of the Institute of High Pressure Physics of the Polish Academy of Sciences and Professor Horst Hahn of Karlsruhe Institute of Technology for serving as members of the committee. The enthusiastic organization by Michael and his team did much to ensure that the symposium progressed smoothly and was enjoyed by all participants. We would like to especially thank Malgorzata for organizing a superb dinner for all participants, which was held in the magnificent staterooms of the Royal Castle in the Warsaw Old Town. We are also grateful to Professor C. Barry Carter, Editor-in-Chief of Journal of Materials Science, for enthusiastically agreeing to publish these papers in this special issue and Professor Mark Aindow for serving as the Coordinating Editor of this special issue; the role of the Coordinating Editor is particularly critical since all submissions are reviewed by him before final acceptance, thus ensuring that all submissions reach the usual quality expected for the Journal. In addition, we much appreciate the very generous financial support provided by Dr. Joseph M. Wells of the Office of Naval Research Global in London, England, Dr. Suveen N. Mathaudhu of the US Army Research Office in Research Triangle Park, North Carolina, the Board of Governors of Acta Materialia, Inc., represented at the meeting by Professor Thaddeus (Ted) Masalski of Carnegie-Mellon University, and the E-MRS central office in Strasbourg, France. The response to our

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call for papers for this special issue was excellent. In this connection, I would like to thank the numerous referees for reviewing the papers expeditiously.

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