

Metallography, Microstructure, and Analysis: Birth of a New Journal

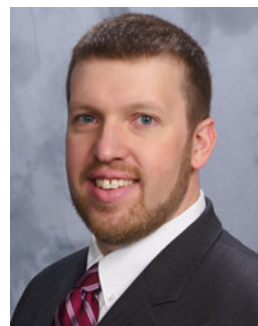
A Welcome from the Editor

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We are very pleased to be offering materials scientists a new forum for dissemination of technical advances as recorded with the aid of a microscope. ASM International perceived a need for a new publication to add to its current coverage of the materials world, and to give one of its affiliate societies, the International Metallographic Society, a journal to call its own. *Metallography, Microstructure, and Analysis (MMA)* was conceived to fill this need. After two years of planning and collaboration with our publisher, Springer, we are pleased to present our first issue.

The appropriate preparation and analysis of a microstructure is a critical component of many materials characterization efforts, whether the ultimate goal is to develop new materials, to advance our understanding of an existing material, or to determine why a failure has occurred. More than any other attribute, microstructure exerts a controlling influence over the final properties and performance of a material. With clear interpretation and a sound understanding, microstructure can be exploited to provide outstanding mechanical, electrical, magnetic, or chemical properties. Conversely, insufficient attention to control of microstructure can lead to unpredictable properties, inconsistent behavior, and material failure. *MMA* is dedicated to the presentation, illustration, and recognition of microstructure and the important implications that can be realized from it. Accordingly, the journal focuses on methods for revealing microstructure, instruments used for its interpretation, and analysis of its influence on material properties.



The objective of a technical journal in any field is to foster the dissemination of acquired knowledge to a broader audience, so that other researchers may use and build upon the work of their colleagues. This sharing of knowledge is especially critical in the fields of metallurgy and materials science, where the preparation of a mounted sample to reveal microstructure is oftentimes equal parts science and art. The myriad lessons learned in the laboratory by metallographers, technicians, and scientists constitute an important body of knowledge that can be of significant benefit to others in this field. One important goal of *MMA* is to promote the sharing of this information.

It is an especially fitting time to be launching a new technical journal in this field, in light of the recent growth and development of analytical techniques that can be applied to the study of microstructures. These tools, such as electron backscattered diffraction, X-ray microtomography, and high resolution electron microscopy, are providing new levels of information about the structure of materials. In addition, continued development in new fields of materials production and design, such as additive manufacturing and integrated computational materials engineering, will require enhanced understanding of the role of

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microstructure in determining material properties. *MMA* will provide a venue where these diverse topics can be discussed collectively in terms of how they both influence, and depend upon, microstructure.

We envision this journal serving as a resource for metallographers, lab technicians, industrial engineers, and research workers alike; a forum for sharing the latest developments concerning the science and art of microstructure preparation and analysis. As evidenced in this inaugural issue, *MMA* will offer a range of formats through which to accomplish this sharing. Full technical articles, short communications, technical lab tips, and letters to the editor will be standard content in this journal. While the editors and editorial board have developed a core vision for

MMA, input from readers and authors will shape and guide this vision as the journal grows. The journal can best serve the materials community if it develops through collaboration and participation from both authors and readers. To this end, we invite you to share your comments and ideas with the editors. Your contributions, either as submitted manuscripts or as general suggestions, are essential if *MMA* is to become the premiere publication for microstructural studies.

In closing, I would like to express my gratitude to ASM International and the committee members who worked so hard to plan and prepare the groundwork for this new journal, and to Springer for giving us support and encouragement, and for making publication of *MMA* a reality.