

CHEMISTRY of MATERIALS

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Editorial

Chemistry of Materials: The "Reaction" Continues

The initial questions concerning the meaning of "materials chemistry" and the need for a journal in this area have now been answered. With this issue, *Chemistry of Materials* begins its sixth year of publication and its second year on a monthly publication schedule. "Reaction" to and interest in this journal and in materials chemistry in general have been extremely favorable, suggesting that the activation energy has been lowered for reaction and interaction at the interface between chemistry, chemical engineering, and materials science and engineering. The rate of and the driving force for these efforts are increasing as significant progress is made in advancing the level of understanding of materials processing and research by the application of chemical principles.

Chemistry of Materials is not the only indication of the growing interest in materials chemistry. In 1985, a Gordon Research Conference (GRC) on Chemistry of Electronic Materials was initiated. The sixth GRC on this topic will be held March 6–11, 1994; emphasis will be on chemical aspects of nanotechnology. Interested individuals should contact Dr. Frances Houle, IBM Almaden Research Center, San Jose, CA 95120. Also, the first NSF-sponsored materials chemistry workshop was held in October, 1993. Organized by Professors Mark Hampden-Smith and Bill Buhro, this workshop had 30 presentations and over 40 attendees. Finally, the next in the continuing series of Florida Advanced Materials Chemistry Conferences, will be held March 27–30, 1994; information can be obtained from Professor William Rees, Chemistry Department, Georgia Institute of Technology, Atlanta, GA 30332.

As anticipated, *Chemistry of Materials* has continued its growth during 1993, the first year of monthly publication. Submissions increased by approximately 30% over 1992, while the rejection rate increased slightly to approximately 32%. Despite the increase in the number of

manuscripts handled, we maintained an average receipt to publication time of 25 weeks for articles and 15 weeks for communications. Although this statistic could not have been achieved without extensive efforts by the ACS publications staff, the primary thanks and credit go to the many dedicated reviewers and authors, who continue to set the standards for high quality and short publication time. We thus want to express our sincere appreciation to those individuals and beg their continued indulgence as the number of submissions increases.

The six short reviews included in our issues during 1993 have been extremely well-received. We also have promises of several more reviews for 1994 in such areas as nonlinear optical materials, sol-gel materials/processes, vanadium phosphates, supramolecular structures, metal silicates, aerogels, proton conduction, vapor-phase epitaxy, and computational approaches to crystallography. Suggestions of topics and commitments for the writing of additional review articles are welcome. Due to the broad and expanding scope of materials chemistry, these articles enhance cross-fertilization and collaboration and educate scientists and engineers in areas outside of their specific fields of expertise.

During 1993, only a few manuscripts were received by *Chemistry of Materials* in softcopy form. The American Chemical Society is in the process of optimizing production of softcopy material; we expect to have the capability to handle 80% of the manuscripts in this form in 1994. Guidelines for the submission of softcopy material is included in this issue under Instructions to Authors.

Chemistry of Materials is embarking on a new venture during 1994. As a result of a special request, we will devote one of the monthly issues of the journal to the area of organic solid-state chemistry. As per the announcement

of this special publication in the September 1993 issue, we will accept papers for the topical issue until January 31, 1994. This particular topic and issue will be in honor of Professor Margaret Etter. Until her untimely death in 1992, she was active in structural aspects of the organic solid state in the Chemistry Department of the University of Minnesota. Professor Etter was also a member of the first editorial advisory board for *Chemistry of Materials*. We would be pleased to consider additional areas of broad current interest to the materials chemistry community for other special topical issues. Please inform Len Interrante, Gary Wnek, or myself of your suggestions.

Although *Chemistry of Materials* has met or exceeded its product and yield goals in terms of timeliness, quality, and subscriptions, some reaction pathways would benefit from novel catalysts. Nearly two years ago, Len Interrante suggested that materials chemistry may be broadly defined as chemistry related to the preparation, analysis, and processing of materials. *Chemistry of Materials* has been

most successful in addressing the first two topics and some aspects of the third; lower yield has been achieved in the manufacturing arena. Considering the current and future emphasis in this area, we would like to attract more papers pertaining to the chemistry and chemical engineering science aspects of materials process technology. In particular, manuscripts dealing with the fundamental chemical issues involved in the manufacture of electronic/photonic materials, ceramics, and biomaterials would be welcome.

We look forward to continued close interaction with authors, reviewers, and readers; this is your journal. Please send us your comments, suggestions, and criticism. With your assistance, we hope to continue to enhance the utility of *Chemistry of Materials* to the expanding number of scientists and engineers involved in materials chemistry.

Dennis W. Hess
Associate Editor