

Foreword

Symposium on Radiation Materials Science in Technology Applications

A symposium with the above title was held in conjunction with the annual TMS (The Minerals, Metals and Materials Society) meeting, Anaheim, California, February 4–8, 1996. The purpose was to explore and highlight how relatively fundamental research on radiation effects in materials science supports fission, fusion, high energy accelerator, and other technologies, such as materials modification by charged particle beams. Understanding the behavior under irradiation is central to controlling performance in these areas. Research is ongoing to develop better materials and processing methods, to characterize response under hostile conditions and to predict and optimize performance. Progress in engineering is strongly linked to work at the atomic and microstructural level.

The symposium included sessions on radiation effects in metallic alloys, ceramics and other compounds. Microstructural response, phase stability, and amorphization as well as the attendant effects on mechanical properties were considered. Computer simulations of radiation effects were well represented. This issue is the proceedings of that meeting, and includes the written manuscripts of about half of the work accepted for presentation at the symposium.

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