

Effects of
RADIATION
on
MATERIALS

19th International Symposium

Margaret L. Hamilton
Arvind S. Kumar
Stan T. Rosinski
Martin L. Grossbeck

Editors



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Effects of Radiation on Materials: 19th International Symposium

*Margaret L. Hamilton, Arvind S. Kumar,
Stan T. Rosinski, and Martin L. Grossbeck, editors*

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Foreword

This publication, *Effects of Radiation on Materials: 19th International Symposium*, contains papers presented at the symposium of the same name held in Seattle, Washington on 16–18 June 1998. The symposium was sponsored by ASTM Committee E10 on Nuclear Technology and Applications. The symposium chairman was Margaret L. Hamilton, Pacific Northwest Laboratory. Arvind S. Kumar, University of Missouri-Rolla, Stan T. Rosinski, Electric Power Research Institute, and Martin L. Grossbeck, Oak Ridge National Laboratory, served as co-chairmen.

Of the various nuclear-oriented symposia, this series is the oldest and most comprehensive. The first symposium with the current name was held in 1960 but grew out of an earlier series that was initiated in 1956 by Committee E10, then called the Committee on Radioisotopes and Radiation Effects.

This 19th international symposium continues the tradition of earlier symposia in that there is a large contribution from the international nuclear community, with a significant increase from countries of the former Soviet Union. As is typical of this series, the largest segment of papers is devoted to pressure vessel embrittlement and its mitigation. Smaller segments address issues of continuing interest in light water reactors, fusion reactors, and to a lesser extent, breeder reactors. These issues are presented in separate sections devoted to classes of materials.

Several emerging issues are addressed in some papers, for example, reduced activation, welding of irradiated materials, and damage resulting from high-energy proton beams in accelerator-driven nuclear systems. It is the expectation of the leaders of this symposium that this publication will continue to reflect the emerging concerns of the nuclear materials community as we proceed into the twenty-first century.

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