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Applications of Synchrotron Radiation Techniques to Materials Science IV

Editors: Susan M. Mini, Stuart R. Stock, Dale L. Perry and Louis J. Terminello

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Applications of Synchrotron Radiation Techniques to Materials Science IV

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PREFACE

This volume contains papers presented at the symposium on “Applications of Synchrotron Radiation Techniques to Materials Science,” during the 1998 MRS Spring Meeting held in San Francisco, California, April 13-17. The symposium brought together the materials science community to focus on characterization techniques that use synchrotron radiation—much like the earlier symposia and volumes on this topic:

1988 MRS Fall Meeting	Volume 143, <i>Synchrotron Radiation in Materials Research</i> Edited by: R. Clarke, J. Gland, and J.H. Weaver
1993 MRS Spring Meeting	Volume 307, <i>Applications of Synchrotron Radiation Techniques to Materials Science</i> Edited by: D.L. Perry, N.D. Shinn, R. Stockbauer, K.L. D'Amico and L.J. Terminello
1994 MRS Fall Meeting	Volume 375, <i>Applications of Synchrotron Radiation Techniques to Materials Science II</i> Edited by: L.J. Terminello, N.D. Shinn, G.E. Ice, K.L. D'Amico, and D.L. Perry
1996 MRS Spring Meeting	Volume 437, <i>Applications of Synchrotron Radiation Techniques to Materials Science III</i> Edited by: L.J. Terminello, S. Mini, H. Ade, and D.L. Perry

As more synchrotron facilities are constructed and go online both in the United States and in other countries, even more applications of synchrotron radiation will be realized. Both basic and applied research possibilities are manifold, including studies of materials mentioned below and those that are yet to be discovered. Also, the combination of synchrotron-based spectroscopic techniques with ever increasing high-resolution microscopy allows researchers to study very small domains of materials in an attempt to understand their chemical and electronic properties. This is especially important in the areas of composites and other related materials involving material bonding interfaces.

The topics covered in this symposium include surfaces, interfaces, electronic materials, metal oxides, solar cells, thin films, carbides, polymers, alloys, nanoparticles, and graphitic materials. Results reported at this symposium relate recent advances in X-ray absorption and scattering, imaging, tomography, microscopy, and topography methods. It has been an interesting 50 years of synchrotron radiation.

S. M. Mini
S. R. Stock
D. L. Perry
L. J. Terminello

May, 1998

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