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Society Symposia Proceedings: Volume 76

Editors: R. E. Howard, E. L. Hu, S. Namba and S. Pang

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Science and Technology of Microfabrication

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Preface

These proceedings are a refereed account of the Symposium on the Science and Technology of Microfabrication, that was held as part of the 1986 Fall Meeting of the Materials Research Society in Boston, MA. The Symposium was designed to present state of the art microfabrication techniques as well as the many applications which make use of those techniques. As device complexity has increased, so have the complexity and requirements of those processes used to fabricate them. Microfabrication is thus far from being merely means to an end. As the limits of achievable resolution are approached and as the perturbations affected by the processes themselves become of greater consequence to proper device operation, the exploration and study of the proper techniques become ends in themselves. The science and technology of microfabrication are inherently cross-disciplinary areas, calling on various aspects of chemistry, physics and materials science. Their applications are wide-ranging, being consequential to a broad spectrum of electronic and mechanical devices and sensors. Further, innovative, high resolution microfabrication techniques make possible access to the study physical phenomena at small dimensions that may in turn lead to new device concepts. The program of this Symposium was constructed to present the variety of techniques and applications of microfabrication. There was discussion of issues, processes and materials for manufacturable VLSI circuits, of processes in transition from research tool to manufacturing application and of the very high resolution techniques utilized for the study of physics at nanometer dimensions. The Symposium brought together participants from industry and the academic setting, with a substantial representation of international participants. The quality of the papers presented and the interest and discussions that were stimulated were gratifying.

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Acknowledgments

We would like to thank all our participants for a successful and stimulating conference. We especially like to acknowledge our invited speakers who provided excellent reviews and set the tone for the various sessions. They were:

A. F. Bernhardt	K. Peterson
D. J. Ehrlich	A. K. Sinha
Y. Horiike	W. J. Skocpol
M. Issacson	A. Wagner
G. Kaminsky	

The manuscripts were reviewed at the meeting to allow rapid publication of the proceedings. We would like to acknowledge the timely reviews by the reviewers which included our invited speakers as well as the following:

J. M. Andrews	P. M. Petroff
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