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MATERIALS RESEARCH SOCIETY SYMPOSIUM PROCEEDINGS VOLUME 160

Layered Structures—Heteroepitaxy, Superlattices, Strain, and Metastability

Symposium held November 27-December 1, 1989, Boston,
Massachusetts, U.S.A.

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Preface

This symposium on layered structures focused on heteroepitaxial growth dynamics, optical characterization techniques, and superlattices of both crystalline and noncrystalline solids. The issue of strain control and stability of the layered structures was both a unifying theme and a major topic of this symposium. The symposium, which was chaired by Jack E. Cunningham, Brian W. Dodson, Fred H. Pollack, and Leo J. Schowalter, ran all week and was divided into ten oral presentation sessions in addition to a poster session held Thursday evening. We also had a successful evening session on Monday in which six manufacturing representatives made presentation on "Future Developments in Epitaxial Techniques and Equipment."

The technical session topics included sessions on the heteroepitaxy of metals, semiconductors, and insulators; metallic superlattices, general topics in strained layer epitaxy; epitaxial growth of III-V semiconductors; small angle x-ray characterization and amorphous layers; and optical characterization of strained layers, quantum wells, superlattices, and other epitaxial layers. A total of 155 technical presentations were made but, in spite of this expanded format, the interest in this symposium was such that we were forced to reject many excellent papers on thin films which did not fit the theme of this year's symposium. Attendance at most sessions was very high, and we were forced to use closed circuit television to an overflow room for some of the sessions. This worked reasonably well although it was somewhat inconvenient.

This proceedings volume includes 127 of the papers presented at the meeting. We thank all the authors for their efforts in preparing their manuscripts with particular appreciation for the invited papers by J.M. Ballingall, P.I. Cohen, O.J. Glembocki, R. Hull, J. Kakalios, T.P. Pearsall, P.S. Peercy, P.D. Persans, J.Y. Tsao, and their coauthors which have helped set the technical tone for this book.

This symposium received financial support from Aixtron, Inc.; ASTeX, Inc.; Blake Industries, Inc., EPI Systems Division - Chorus Corp., Emcore, Inc.; Instruments SA (Riber); MDC Vacuum Products Corp., VG Semicon, Ltd.; and Varian, Inc. This support is gratefully acknowledged and helped to make the symposium a great success.

April 14, 1990

Brian W. Dodson
Leo J. Schowalter
Jack E. Cunningham
Fred Pollak

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