Springer Series in ***Materials Science*** 16

Edited by Hans-Joachim Queisser

Springer Series in Materials Science

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Hydrogen in Crystalline Semiconductors

With 250 Figures

Springer-Verlag
Berlin Heidelberg New York
London Paris Tokyo
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Budapest

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W-7000 Stuttgart 80, Fed. Rep. of Germany

ISBN-13: 978-3-540-55491-2 e-ISBN-13: 978-3-642-84778-3
DOI: 10.1007/978-3-642-84778-3

This text was prepared using the PS™ Technical Word Processor

54/3140-5 4 3 2 1 0 – Printed on acid-free paper

Preface

This monograph arose out of the recognition of the importance of hydrogen in modern semiconductor technology. Hydrogen is a component of most chemicals used in the fabrication of electronic and photonic devices, is easily incorporated into semiconductors and it is a model impurity for studying defect reactions in solids.

While writing this volume we have received a good deal of encouragement from our colleagues at AT&T Bell Laboratories, State University of New York at Albany and Lehigh University, and from collaborators at other institutions: to them we extend our sincere appreciation. In particular we would like to thank W.C. Dautremont-Smith, J. Lopata, V. Swaminathan, K. Bergman, L.C. Synder, P. Deák, J.T. Borenstein, T.S. Shi, D. Tulchinsky, G.G. DeLeo, W.B. Fowler, G.D. Watkins and D. Kozuch for their crucial contributions to this work. We would also like to thank Mrs. Danuta Sowinska-Kahn for her unfailing expertise in preparing much of the artwork. Finally we owe a great debt to Helmut Lotsch of Springer-Verlag for his initial suggestion to write this book and then his patient and professional guidance in seeing the project to fruition.

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October 1991

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