

Contents

Ulrich Eckern and Gerd Schön

Charge Transfer between Weakly Coupled Normal Metals and Superconductors at Low Temperatures 1

Wilhelm Zwerger

Quantum Effects and the Onset of Superconductivity in Granular Films 19

Ingo Rehberg, Bernhard L. Winkler, Manuel de la Torre Juarez, Steffen Rasenat, and Wolfgang Schöpf

Pattern Formation in a Liquid Crystal 35

Bruno Lengeler

X-Ray Absorption and Reflection in Materials Sciences 53

James P. Wolfe

**Propagation of Large-Wavevector Acoustic Phonons
New Perspective from Phonon Imaging 75**

Wolfgang Ludwig

Theory of Dynamical Surface States and Reconstructions at Crystal Surface 107

Henning Neddermeyer and Stephan Tosch

Scanning tunneling microscopy and spectroscopy on clean and metal-covered Si surfaces 133

Jürgen Kuhl, Alfred Honold, Lothar Schultheis, and Charles W. Tu

Optical Dephasing and Orientational Relaxation of Wannier-Excitons and Free Carriers in GaAs and GaAs/Al_xGa_{1-x}As Quantum Wells 157

Ulrich Kaufmann

The Spectroscopic Evidence for the Identity of EL2 and the As_{Ga} Antisite in As-Grown GaAs 183

<i>Bruno Meyer, Klaus Krambock, Detlev Hofmann, and Johann-Martin Spaeth</i> On the Charge State of the EL2 Mid Gap Level in Semi-Insulating GaAs from a Quantitative Analysis of the Compensation	201
<i>Patricia M. Mooney</i> Deep Donor Levels (DX Centers) in III–V Semiconductors: Recent Experimental Results	215
<i>Matthias Scheffler</i> Chemical Binding, Stability and Metastability of Defects in Semiconductors .	231
<i>Rolf E. Hummel</i> A New Look at the Reliability of Thin Film Metallizations for Microelectronic Devices	251
<i>Mark A. Reed, John N. Randall, James H. Luscombe, William R. Frensley, Raj J. Aggarwal, Richard J. Matyi, Tom M. Moore, and Anna E. Wetsel</i> Quantum Dot Resonant Tunneling Spectroscopy	267
<i>Detlef Heitmann, Thorsten Demel, Peter Grambow, and Klaus Ploog</i> DC and Far Infrared Experiments on Deep Mesa Etched Single and Multi-Layered Quantum Wires	285
<i>C. W. J. Beenakker, H. van Houten, and B. J. van Wees</i> Coherent electron focusing	299
<i>Peter Marquardt and Guenther Nimtz</i> The Size-Induced Metal-Insulator Transition and Related Electron Interference Phenomena in Modern Microelectronics	317