

Table of Contents

Acknowledgements

Recent Measurements and Theory Relating to Impurity-Induced LVMS in GaP and GaAs	
R.C. Newman, E.G. Grosche, M.J. Ashwin, B.R. Davidson, D.A. Robbie, R.S. Leigh and M.J.L. Sangster	1
Optically-Induced Defects in Si-H Nanoparticles	
M.J. Caldas, R.J. Baierle, E. Molinari and S. Ossicini	11
Defects and Doping in III-V Nitrides	
C.G. Van de Walle and J. Neugebauer	19
A Programme for the Future?	
A.M. Stoneham	27
The Hydrogen-Saturated Self-Interstitial in Silicon and Germanium	
M. Budde, B. Bech Nielsen, P. Leary, J.P. Goss, R. Jones, P.R. Briddon, S. Öberg and S.J. Breuer	35
Matrix-Induced Isotope Shift of a Vibrational Mode of Interstitial Oxygen in Germanium	
B. Pajot, E. Artacho, L.I. Khirunenko, K. Itoh and E.E. Haller	41
Isotopic Shifts of the Rotational States of Interstitial Oxygen in Germanium	
N. Aichele, U. Gommel, K. Lassmann, F. Maier, F. Zeller, E.E. Haller, K.M. Itoh, L.I. Khirunenko, V.I. Shakhovtsov, B. Pajot, E. Fogarassy and H.J. Müsing	47
DLTS Combined with Perturbed Angular Correlation (PAC) on Radioactive ^{111}In Atoms in Ge	
C. Zistl, R. Sielemann, H. Hässlein, S. Gall, D. Bräunig and J. Bollmann	53
Microscopic Study of the Vacancy and Self-Interstitial in Germanium by PAC	
H. Hässlein, R. Sielemann and C. Zistl	59
Localization of Nondegenerate Electrons at Random Potential of Charged Impurities	
M.S. Kagan, E.G. Landsberg and N. Zhdanova	65
Resonance Acceptor States and THz Generation in Uniaxially Strained p-Ge	
I.V. Altukhov, E.G. Chirkova, M.S. Kagan, K.A. Korolev, V.P. Sinis, K. Schmalz, M.A. Odnoblyudov and I.N. Yassievich	71
Ionized Impurity Scattering in Isotopically Engineered, Compensated Ge:Ga,As	
K.M. Itoh, T. Kinoshita, W. Walukiewicz, J.W. Beeman, E.E. Haller, J. Muto, J.W. Farmer and V.I. Ozhogin	77
Defects in SiGe	
A. Nylandsted-Larsen	83
Acceptor States in Boron Doped SiGe Quantum Wells	
K. Schmalz, M.S. Kagan, I.V. Altukhov, K.A. Korolev, D. Orlov, V.P. Sinis, S.G. Tomas, K.L. Wang and I.N. Yassievich	91
Substitutional Carbon in Ge and $\text{Si}_{1-x}\text{Ge}_x$	
L. Hoffmann, J.C. Bach, J.L. Hansen, A.N. Larsen, B.B. Nielsen, P. Leary, R. Jones and S. Öberg	97
Ge Content Dependence of the Infrared Spectrum of Interstitial Oxygen in Crystalline Si-Ge	
D. Wauters and P. Clauws	103
Optical Investigation of Ge-Rich $\text{Ge}_{1-x}\text{Si}_x$ ($0 \leq x \leq 0.1$) Alloys	
M. Franz, K. Pressel, K.F. Dombrowski, H. Rücker, A. Barz, P. Dold and K.W. Benz	109
Electrical Characterization of Electron Beam Induced Defects in Epitaxially Grown $\text{Si}_{1-x}\text{Ge}_x$	
M. Mamor, F.D. Auret, S.A. Goodman, G. Myburg, P.N.K. Deenapanray and W.E. Meyer	115
Lattice Defects in $\text{Si}_{1-x}\text{Ge}_x$ Epitaxial Diodes Induced by 20-MeV Alpha Rays	
H. Ohyama, J. Vanhellemont, E. Simoen, C. Claeys, Y. Takami, K. Hayama, H. Sunaga, J. Poortmans and M. Caymax	121
Positron Annihilation Study of Electron-Irradiated Silicon-Germanium Bulk Alloys	
A. Kawasuso, S. Okada, I. Yonenaga, T. Honda and M. Suezawa	127
Electronic Properties of Defects Introduced in n- and p-Type $\text{Si}_{1-x}\text{Ge}_x$ During Ion Etching	
S.A. Goodman, F.D. Auret, M. Mamor, P.N.K. Deenapanray and W.E. Meyer	133
The Role of Non-Radiative Defects in Thermal Quenching of Luminescence in SiGe/Si Structures Grown by Molecular Beam Epitaxy	
I.A. Buyanova, W.M. Chen, G.R. Pozina, B. Monemar, W.X. Ni and G.V. Hansson	139

Gold-Related Levels in Relaxed Si_{1-x}Ge_x Alloy Layers: A Study of the Pinning Effect	145
A. Mesli, P. Kringhøj and A.N. Larsen	
Dislocation-Related Electronic States in Strain-Relaxed Si_{1-x}Ge_x/Si Epitaxial Layers Grown at Low Temperature	151
P.M. Mooney and K. Shum	
Dislocation Activities in Bulk GeSi Crystals	159
I. Yonenaga and K. Sumino	
Schottky Diodes on Si_{1-x-y}Ge_xC_y Alloys: Measurement of Band Off-Set by DLTS	165
M. Serpentini and G. Brémond	
Molecular-Dynamics Simulations of Microscopic Defects in Silicon	171
S.K. Streicher and P.A. Fedders	
Comparison of Muonium (Hydrogen) Dynamics in Germanium and Silicon	179
R.L. Lichti, K.H. Chow, S.F.J. Cox, T.L. Estle, B. Hitti and C. Schwab	
Hydrogenation and Passivation of B in Si by Boiling in Water Pressurized up to 10 ATM	185
Y. Ohmura, M. Libezny, M. Ohtaka, A. Kimoto and M. Yamaura	
Low Temperature Hydrogen Diffusion in Silicon: Influence of Substrate Quality and the Surface Damage	191
M.I. Symko, B.L. Sopori, R. Reedy and K.M. Jones	
Mechanism of Ultrasonic Enhanced Hydrogenation in Poly-Si Thin Films	197
S.S. Ostapenko	
Hydrogen Molecules in Crystalline Silicon	203
M. Kitajima, K. Ishioka, K.G. Nakamura, N. Fukata, K. Murakami, J. Kikuchi and S. Fujimura	
Thermal Stability of Hydrogen Molecule in Crystalline Silicon	211
N. Fukata, K. Murakami, K. Ishioka, K.G. Nakamura, M. Kitajima, S. Fujimura, J. Kikuchi and H. Haneda	
Emission and Capture Kinetics for a Hydrogen-Related Negative-U Center in Silicon: Evidence for Metastable Neutral Charge State	217
V.P. Markevich, L.I. Murin, T. Sekiguchi and M. Suezawa	
IR Studies of Si-H Bond-Bending Vibrational Modes in Si	223
S.Z. Tokmoldin and B.N. Mukashev	
Optical Absorption Due to Hydrogen Bound to Interstitial Si in Si Crystal Grown in Hydrogen Atmosphere	229
M. Suezawa	
Trapping Site of Hydrogen Molecule in Crystalline Silicon	235
K. Ishioka, K.G. Nakamura, M. Kitajima, N. Fukata, K. Murakami, S. Fujimura and J. Kikuchi	
Formation and Structure of Hydrogen Molecules in Crystalline Si	241
A.W.R. Leitch, V. Alex and J. Weber	
Structure and Charge-State-Dependent Instability of a Hydrogen-Carbon Complex in Silicon	247
Y. Kamiura, N. Ishiga, S. Ohyama and Y. Yamashita	
The Trapping of Hydrogen at Carbon Defects in Silicon	253
A. Mainwood	
The M-Line (760.8 meV) Luminescence System Associated with the Carbon-Hydrogen Acceptor Centre in Silicon	259
A.N. Safonov and E.C. Lightowlers	
Interstitial Carbon-Hydrogen Defects in Silicon	265
P. Leary, S. Öberg, P.R. Briddon and R. Jones	
Low-Temperature Migration of Hydrogen and Interaction with Oxygen	271
K.B. Nielsen, B.B. Nielsen and J. Hansen	
Anomalous Shift of the 1075 cm⁻¹ Oxygen-Hydrogen Defect in Silicon	277
B. Hourahine, R. Jones, S. Öberg and P.R. Briddon	
Vibrational Absorption from Oxygen-Hydrogen (O_i-H₂) Complexes in Hydrogenated CZ Silicon	283
R.E. Pritchard, M.J. Ashwin, R.C. Newman, J.H. Tucker, E.C. Lightowlers, M.J. Binns, R.J. Falster and S.A. McQuaid	
The I Centre: A Hydrogen Related Defect in Silicon	289
J. Gower, G. Davies, E.C. Lightowlers and A.N. Safonov	

Theory of Gold-Hydrogen Complexes in Silicon	295
A. Resende, J.P. Goss, P.R. Briddon, S. Öberg and R. Jones	
Electrically Active Silver-Hydrogen Complexes in Silicon	301
N. Yarykin, J.-. Sachse, J. Weber and H. Lemke	
Palladium-Hydrogen Related Complexes in Silicon	307
J.-. Sachse, J. Weber and H. Lemke	
Effects of Hydrogen Plasma on Dislocation Motion in Silicon	313
Y. Yamashita, F. Jyobe, Y. Kamiura and K. Maeda	
Hydrogenation of Copper Related Deep States in n-Type Si Containing Extended Defects	319
J. Kaniewski, M. Kaniewska, L. Ornoch, T. Sekiguchi and K. Sumino	
Hydrogenation of Deep Defect States in n-Type Si Containing Extended Defects and Transition Metal (Ni or Fe)	325
M. Kaniewska, J. Kaniewski, L. Ornoch, T. Sekiguchi and K. Sumino	
Metastable Defects and Recombination in Hydrogenated Amorphous Silicon	331
E. Morgado and R.T. Henriques	
Tracing Diffusion by Laplace Deep-Level Spectroscopy	337
K.B. Nielsen and L. Dobaczewski	
Defects in AS-Grown Silicon and their Evolution During Heat Treatments	341
J. Vanhellemont, E. Dornberger, J. Esfandyari, G. Kissinger, M.-. Trauwaert, H. Bender, D. Gräf, U. Lambert and W. von Ammon	
An Investigation of the Possibility that Oxygen Diffusion in Czochralski Silicon is Catalyzed during Clustering	347
S.A. McQuaid, B.K. Johnson, R.J. Falster and K.F. Kelton	
Temperature-Dependent Widths of Infrared and Far-Infrared Absorption Lines of Oxygen in Silicon	355
H. Yamada-Kaneta	
The Oxygen Dimer in Silicon: Some Experimental Observations	361
T. Hallberg, J.L. Lindström, L.I. Murin and V.P. Markevich	
Formation of Oxygen Dimers in Silicon during Electron-Irradiation Above 250 °C	367
J.L. Lindström, T. Hallberg, P. Liberski, B.G. Svensson, L.I. Murin and V.P. Markevich	
High-Field EPR Spectroscopy of Thermal Donors in Silicon	373
R. Dirksen, F.B. Rasmussen, T. Gregorkiewicz and C.A.J. Ammerlaan	
Shallow Thermal Donors in Annealed CZ Silicon and Links to the NL10 EPR Spectrum: The Relevance of H, Al and N Impurities	379
R.C. Newman, M.J. Ashwin, R.E. Pritchard, J.H. Tucker, E.C. Lightowlers, T. Gregorkiewicz, I.S. Zevenbergen, C.A.J. Ammerlaan, R.J. Falster and M.J. Binns	
Formation of Ultra Shallow Donors in Silicon by Long-Term-Annealing at 470 °C	385
P. Liberski, T. Hallberg, B.G. Svensson, J.L. Lindström and M. Kleverman	
Local Vibrational Modes of Weakly Bound O-H Complexes in SI	391
B.B. Nielsen, K. Tanderup, M. Budde, K.B. Nielsen, J.L. Lindström, R. Jones, S. Öberg, B. Hourahine and P.R. Briddon	
Phonon Scattering in Heat-Treated Cz-Silicon	399
F. Zeller, C. Wurster, K. Lassmann and W. Eisenmenger	
Determination of Stoichiometry and Oxygen Content in Platelike and Octahedral Oxygen Precipitates in Silicon with FT-IR Spectroscopy	405
O. De Gryse, P. Clauws, J. Vanhellemont and C. Claeys	
Influence of the Li Concentration on the Photoluminescence Spectra of Neutron-Irradiated Silicon: Passivation of Radiation Induced Centers	411
F. Rodriguez, G. Davies and E.C. Lightowlers	
Electric-Dipole Spin Resonance of Be-Doped Silicon	417
H. Schroth, K. Lassmann, C. Borgmann and H. Bracht	
Cadmium-Related Defects in Silicon: Electron-Paramagnetic-Resonance Identification	423
W. Gehlhoff, A. Näser, M. Lang and G. Pensl	
Iron in p-Type Silicon: A Comprehensive Model	429
S. Zhao, A.L. Smith, S.H. Ahn, G.J. Norga and M.T. Platero	
Mössbauer Spectroscopy of Fe in Silicon with the Novel Laser-Ionized $^{57}\text{Mn}^+$ Ion Beam at Isolde	437
G. Weyer, S. Degroote, M. Fanciulli, V.N. Fedoseyev, G. Langouche, V.I. Mishin, A.-. Van Bavel, A. Vantomme and the ISOLDE Collaboration	

Recombination-Enhanced Fe Atom Jump of Fe-Acceptor Pairs in Si	443
T. Takahashi and M. Suezawa	
Precipitation of Iron in FZ and CZ Silicon	449
H. Hieslmair, A.A. Istratov, S.A. McHugo, C. Flink and E.R. Weber	
The Orthorhombic FeIn Complex in Silicon	455
P. Tidlund and M. Kleverman	
Copper in Silicon: Quantitative Analysis of Internal and Proximity Gettering	461
S.A. McHugo, T. Heiser, H. Hieslmair, C. Flink, E.R. Weber, S.M. Myers and G.A. Petersen	
A Study of the Copper-Pair Related Centers in Silicon	467
A.A. Istratov, T. Heiser, H. Hieslmair, C. Flink, J. Krüger and E.R. Weber	
The Photoluminescence of Pt-Implanted Silicon	473
E. Alves, J. Bollmann, M. Deicher, M.C. Carmo, M.O. Henry, M.H.A. Knopf, J.P. Leitão, R. Magerle and C.J. McDonagh	
Identification of the Si:Au and Si:Pt $1S_{3/2}(\Gamma_8) + \Gamma$ Phonon-Assisted Fano Resonance	479
M. Kleverman, J. Olajos and P. Tidlund	
Silver-Related Donor Defect in Silicon	485
M. Zhu, G. Davies, M. Zafar Iqbal and E.C. Lightowers	
Isolated Substitutional Silver and Silver-Induced Defects in Silicon: An Electron Paramagnetic Resonance Investigation	491
P.N. Hai, T. Gregorkiewicz, C.A.J. Ammerlaan and D.T. Don	
Pseudo or Deep Donor Excitation Spectra in Silicon	497
M. Kleverman	
Vacancies and Interstitial Atoms in e^--Irradiated Silicon	503
H. Zillgen and P. Ehrhart	
Vacancy Aggregates in Silicon	509
J.L. Hastings, S.K. Streicher and P.A. Fedders	
Identification of VH in Silicon by EPR	515
P. Johannessen, J.R. Byberg, B.B. Nielsen, P. Stallinga and K.B. Nielsen	
Novel Luminescent Centres in Cadmium Doped Silicon	521
C.A. Frehill, M.O. Henry, E. McGlynn, S.E. Daly, M. Deicher, R. Magerle, K.G. McGuigan, A. Safanov and E.C. Lightowers	
Defect Clusters in Silicon: Impact on the Performance of Large-Area Devices	527
B.L. Sopori	
Modeling of Self-Interstitial Clusters and their Formation Mechanism in Si	535
S. Takeda, N. Arai and J. Yamasaki	
Self-Interstitials in Irradiated Silicon	541
B.N. Mukashev, H.P. Zeindl and Y.V. Gorelkinskii	
High Resolution EELS Study of Extended Defects in Silicon	547
H. Kohno, N. Arai, T. Mabuchi, M. Hirata, S. Takeda, M. Kohyama, M. Terauchi and M. Tanaka	
Electron Irradiation Effects in Silicon Thin Foils Under Ultra-High Vacuum Environment	553
S. Takeda, K. Koto, M. Hirata, T. Kuno, S. Iijima and T. Ichihashi	
Application of Spin Dependent Recombination for Investigation of Point Defects in Irradiated Silicon	559
M.M. Afanasjev, R. Laiho, L.S. Vlasenko and M.P. Vlasenko	
Electrical and Optical Characterisation of Defects Induced in Epitaxially Grown n-Si During 1 keV Noble Gas Ion Bombardment	565
P.N.K. Deenapanray, F.D. Auret, G. Myburg, W.E. Meyer and S.A. Goodman	
Fano Resonance in a Vibronic Sideband in Silicon	571
J. Gower, G. Davies and E.C. Lightowers	
Frenkel Pairs and Impurity-Defect Interactions in p-Type Silicon Irradiated with Fast Electrons and Gamma-Rays at Low Temperatures	575
V.V. Emtsev, U. Dedek, P. Ehrhart, P.D. Kervalishvili, M.A. Margaryan, D.S. Poloskin and H. Zillgen	
Impurity-Vacancy Complexes Formed by Electron Irradiation of Czochralski Silicon	581
V. Avalos and S. Dannefaer	
Luminescence Centers in High-Energy Ion-Implanted Silicon	587
K. Terashima, T. Ikarashi, M. Watanabe and T. Kitano	

Performance Degradation of Microcrystalline Silicon-Based p-i-n Detectors Upon He⁴ Irradiation	593
R. Schwarz, M. Vieira, F. Maçarico, S. Koynov, S. Cardoso and J.C. Soares	
Persistent Excited Conductivity Induced by Proton Irradiation in a-Si:H	599
H. Amekura, N. Kishimoto and K. Kono	
Photoluminescence Centers Associated with Noble-Gas Impurities in Silicon	605
S.K. Estreicher and J. Weber	
Implantation of Reactive and Unreactive Ions in Silicon	611
J.R. Brucato, G.A. Baratta, G. Compagnini and G. Strazzulla	
Photoluminescence Vibrational Spectroscopy of Defects Containing the Light Impurities Carbon and Oxygen in Silicon	617
E.C. Lightowlers and A.N. Safonov	
Raman Scattering Measurements in Neutron-Irradiated Silicon	623
M. Coeck, C. Laermans, R. Provoost and R.E. Silverans	
Recombination Centers in Electron Irradiated Si and GaAs	629
J.C. Bourgoin, M. Zazoui and M.A. Zaidi	
Study of a Li- and C-Related Center Formed at High Annealing Temperatures in Neutron-Irradiated FZ Silicon Doped with Li	635
F. Rodriguez, G. Davies and E.C. Lightowlers	
The Influence of Accumulated Defects on the Lateral Spread of Implanted Ions	641
S.T. Nakagawa	
Structural Change and Relaxation Processes of Tetrahedral Point Defects	647
E. Mohamed and Y. Shinozuka	
The Jahn-Teller Effect and the Structure of Monovacancies in Si, SiC and C	653
A. Zywiertz, J. Furthmüller and F. Bechstedt	
Transient Lattice Vibration Induced by Successive Carrier Captures at a Deep-Level Defect and the Effect on Defect Reactions	659
Y. Shinozuka and T. Karatsu	
Characterisation of Recombination Centres in Solar Cells by DLTS	665
T. Markvart	
Defect-Engineering Rad-Hard Detectors for the CERN LHC	671
B.C. MacEvoy, K. Gill and G. Hall	
Theory of 3d Transition Metal Defects in 3C-SiC	677
H. Overhof	
A Deep Photoluminescence Band in 4H SiC Related to the Silicon Vacancy	685
E. Sörman, N.T. Son, W.M. Chen, C. Hallin, J.L. Lindström and E. Janzén	
Thermal Activation Energies for the Three Inequivalent Lattice Sites for the B_{Si} Acceptor in 6H-SiC	691
A.O. Evvaraye, S.R. Smith, W.C. Mitchel, H. McD. Hobgood, G. Augustine and V. Balakrishna	
Optical Absorption and Zeeman Study of 6H-SiC:Cr	697
A. Dörmen, B. Kaufmann, J. Baur, M. Kunzer, J. Schneider and P. Baranov	
High-Frequency EPR Studies of Shallow and Deep Boron Acceptors in 6H-SiC	703
J. Schmidt, T. Matsumoto, O.G. Poluektov, A. Arnold, T. Ikoma, P.G. Baranov and E.N. Mokhov	
Gas and Heat Treatment Effects on the Defect Structure of a-SiC:H Films	709
T. Friessnegg, M. Boudreau, P. Mascher, P.J. Simpson and W. Puff	
Capacitance Spectroscopy of Deep Centres in SiC	715
A.A. Lebedev and N.A. Sobolev	
Native and Electron Irradiation Induced Defects in 6H-SiC	721
T. Friessnegg and S. Dannefaer	
Raman Scattering Analysis of Defects in 6H-SiC Induced by Ion Implantation	727
A. Pérez-Rodríguez, O. González-Varona, L. Calvo-Barrio, J.R. Morante, H. Wirth, D. Panknin and W. Skorupa	
Vacancy-Type Defects in Proton-Irradiated SiC	733
W. Puff, P. Mascher, A.G. Balogh and H. Baumann	
Theoretical Studies on Defects in SiC	739
P. Deák, A. Gali, J. Miró, R. Gutierrez, A. Sieck and T. Frauenheim	

Formation and Relaxation of Hydrogen-Related Defects in the Subsurface Region of Diamond Films	745
K. Hayashi, T. Sekiguchi and H. Okushi	
Hydrogen and Hydrogen-Like Defects in Diamond	
S.H. Connell, J.P.F. Sellschop, R.D. Maclear, B.P. Doyle, I.Z. Machi, R.W.N. Nilen, J.E. Butler and K. Bharuth-Ram	751
Fine Structure of the Boron Bound Exciton in Diamond	
H. Sternschulte, S. Wahl, K. Thonke, R. Sauer, T. Ruf, M. Cardona and T.R. Anthony	757
Investigation of Ion-Implanted Boron in Diamond	
K. Bharuth-Ram, B. Ittermann, H. Metzner, M. Füllgrabe, M. Heemeier, F. Kroll, F. Mai, K. Marbach, P. Meier, D. Peters, H. Thiess, H. Ackermann, J.P.F. Sellschop, H.-. Stockmann, K.P. Lieb and M. Uhrmacher	763
Isotopic Shifts of the N3 Optical Transition in Diamond	
G. Davies, I. Kiflawi, G. Sittas and H. Kanda	769
Breakdown of the Vacancy Model for Impurity-Vacancy Defects in Diamond	
R. Jones, J.P. Goss, P.R. Briddon and S. Öberg	775
A First Principles Study of Interstitial Si in Diamond	
J.P. Goss, R. Jones, S.J. Breuer, P.R. Briddon and S. Öberg	781
Radiation Damage of Silicon and Diamond by High Energy Neutrons, Protons and α Particles	
A. Mainwood, J. Cunningham and D. Usher	787
Study of Defects in Diamond Films by Electrical Measurements	
L. Pereira, E. Pereira and H.L. Gomes	793
Valence Controls and Codoping for Low-Resistivity n-Type Diamond by Ab Initio Molecular-Dynamics Simulation	
T. Nishimatsu, H. Katayama-Yoshida and N. Orita	799
Intrinsic Modulation Doping in InP-Based Heterostructures	
W.M. Chen, I.A. Buyanova, W.G. Bi and C.W. Tu	805
Pressure Dependent Two-Dimensional Electron Transport in Defect Doped InGaAs/InP Heterostructures	
D. Wasik, L. Dmowski, J. Mikucki, J. Lusakowski, L. Hsu, W. Walukiewicz, W.G. Bi and C.W. Tu	813
Study of Iron-Related Defects in SI-InP by Positron Annihilation Spectroscopy	
B. Marí, F.J. Navarro, M.A. Hernández and J.L. Ferrero	819
Homogeneity of Fe-Doped InP Wafers Using Optical Microprobes	
L.F. Sanz, M.A. Gonzalez, M. Avella, A.L. Alvarez, J. Jiménez and R. Fornari	825
Osmium Related Deep Levels in p-InP and their Interaction with Alpha Radiation	
S. Parveen, A. Khan, U.S. Qurashi, N. Zafar, M. Zafar Iqbal, L. Köhne, A. Dadgar and D. Bimberg	831
A Sharp Defect-Annealing Stage Below Room Temperature in Irradiated N-Type Indium Phosphide	
A. Canimoglu and D.W. Palmer	837
Alpha Radiation-Induced Deep Levels in p-InP	
A. Khan, U.S. Qurashi, N. Zafar, M. Zafar Iqbal, A. Dadgar and D. Bimberg	843
Site Stability, Diffusion, and Charge Dynamics for Muonium in GaAs	
T.L. Estle, K.H. Chow, S.F.J. Cox, E.A. Davis, B. Hitti, R.F. Kiefl, R.L. Lichti and C. Schwab	849
Structure and Reorientation of the Si_{As}-H and Zn_{Ga}-H Complexes in Gallium Arsenide	
A.A. Bonapasta, P. Giannozzi and M. Capizzi	855
Ab Initio Study of the C_{As} Local Oscillator in Gallium Arsenide	
K. Petzke, C. Göbel, C. Schrepel and U. Scherz	861
Spectroscopy of Nitrogen-Related Centers in Gallium Arsenide	
H.C. Alt, B. Wiedemann and K. Bethge	867
Atomic Configuration of Oxygen Negative-U Center in GaAs	
A. Taguchi and H. Kageshima	873
Ga Vacancies as Compensating Centers in Homogeneously or δ-Doped GaAs(Si) Layers	
T. Laine, K. Saarinen, P.J. Hautajarvi and C. Corbel	879
Positron Annihilation and Scanning Tunneling Microscopy Used to Characterise Defects in Highly Si-Doped GaAs	
J. Gebauer, R. Krause-Rehberg, C. Domke, P. Ebert and K. Urban	885

Chemical Trends in Electronic Properties of Arsenic Vacancy-3d Transition Metal Pairs in Gallium Arsenide	893
E.J. França and L.V.C. Assali	
Perturbed Angular Correlation Measurements and Lattice Site Location of Br in GaAs	899
M. Wehner, M. Risse, R. Vianden, M. Dalmer, H. Hofäss, M.C. Ridgway, M. Petracic and the ISOLDE Collaboration	
Equilibrium Vacancies in Te-Doped GaAs Studied by Positron Annihilation	905
J. Gebauer, R. Krause-Rehberg, M. Lausmann and G. Lippold	
Spectroscopic Investigation of Neutral Niobium in GaAs	911
D. Ammerlahn, B. Clerjaud, D. Côte, L. Köhne, M. Krause and D. Bimberg	
Yb Luminescence Centres in MBE-Grown and Ion-Implanted GaAs	917
A.A. Gippius, V.M. Konnov, N.N. Loyko, V.V. Ushakov, T.V. Larikova, I.P. Kazakov, V.A. Dravin and N.A. Sobolev	
Arsenic Interstitial Pairs in GaAs	923
P. Papoulias, C.G. Morgan, J.T. Schick, J.I. Landman and N. Rahhal-Orabi	
Electrical Properties of Low Temperature Grown GaAs	929
M. Stellmacher, J. Nagle, K. Khirouni and J.C. Bourgoin	
Traps Found in GaAs MESFETs: Properties Location and Detection	933
B.K. Jones and M.A. Iqbal	
Influence of Dopant Species on Electron Mobility in Heavily Doped Semiconductors	939
G. Kaiblinger-Grujin, H. Kosina, C. Köpf and S. Selberherr	
Creation of Ga_{As} Antisites in GaAs by Transmutation of Radioactive ⁷¹As_{As} to Stable ⁷¹Ga_{As}	945
R. Magerle, A. Burchard, D. Forkel-Wirth, M. Deicher and the ISOLDE Collaboration	
Defect Control in As-Rich GaAs	951
P. Specht, S. Jeong, H. Sohn, M. Luysberg, A. Prasad, J. Gebauer, R. Krause-Rehberg and E.R. Weber	
As Antisite-Related Defects Detected by Spin-Dependent Recombination in Delta-Doped (Si) GaAs Grown by MBE at Low Temperature	957
K. Krambrock, M.V.B. Pinheiro and S.M. Medeiros	
Electrically Detected Magnetic Resonance at Different Microwave Frequencies	963
M.S. Brandt, M.W. Bayerl, N.M. Reinacher, T. Wimbauer and M. Stutzmann	
Metastable Antisite Pair in GaAs	969
S. Pöykkö, M.J. Puska and R.M. Nieminen	
Theoretical Study of Antistructure Defects in GaAs	975
A. Janotti, A. Fazzio, P. Piquini and R. Mota	
Study of Plastically Deformed Semiconductors by Means of Positron Annihilation	981
H.S. Leipner, C.G. Hübner, J. Krüger and R. Krause-Rehberg	
The Micro Structure of the EL2 Defect in GaAs - A Different Look to Former Spin Resonance Data	987
F. Wirbeleit and J. Niklas	
Detection and Identification of the EL2 Metastable in GaAs	993
J.C. Bourgoin	
Defects in Thick Epitaxial GaAs Layers	997
H. Samie and J.C. Bourgoin	
Effects of Copper Diffusion on the Native Defect EL2 in GaAs	1003
D. Seghier and H.P. Gislason	
EL2 Induced Enhancement of the Donor Acceptor Pair Luminescence in GaAs	1009
V. Alex and J. Weber	
Observation of Persistent Electron Capture in N-Type Gallium Arsenide Studied by Optically Detected Magnetic Resonance	1015
K. Krambrock, M.V.B. Pinheiro, K.H. Wietzke and J.M. Spaeth	
ODMR Investigation of Proton Irradiated GaAs	1021
S.A. Goodman, F.K. Koschnick, C. Weber, J.M. Spaeth and F.D. Auret	
Uniaxial-Stress Symmetry Studies on the E1, E2 and E3 Irradiation-Induced Defects in Gallium Arsenide	1027
S.J. Hartnett and D.W. Palmer	
Magnetic Resonance and Positron Annihilation of Intrinsic Acceptors in ITC-Treated GaAs	1033
K. Krambrock, C. Corbel and J.M. Spaeth	

Defects in Neutron Irradiated, LEC Semi-Insulating GaAs	1039
B.K. Jones, J.M. Santana and T. Sloan	
Electrical Characterization of Defects Introduced During Plasma-Based Processing of GaAs	1045
F.D. Auret, S.A. Goodman, G. Myburg, W.E. Meyer, P.N.K. Deenapanray, M. Murtagh, S. Ye, H.J. Masterson, J.T. Beechinor and G.M. Crean	
Metastable Charge Recovery in Plasma-Irradiated η-GaAs	1051
K. Wada and H. Nakanishi	
Metastable Amorphous Structure in Ion Implanted GaAs	1057
I.D. Desnica-Franković, U.V. Desnica, M. Ivanda, D. Gracin and T.E. Haynes	
Theory of Nitrogen-Hydrogen Complexes in GaP	1063
V.J.B. Torres, S. Öberg and R. Jones	
Photoluminescence, Optical Absorption, and EPR Studies of the Co^{2+}-S_P Pair Defect in GaP	1069
R. Göser, J. Kreissl, K. Thonke and W. Ulrici	
Resonance-Mode Phonon Replica in the Optical Spectra of Transition-Metal Impurities in GaP	1075
C. Schrepel, U. Scherz, W. Ulrici and K. Thonke	
GaN Grown Using Trimethylgallium and Triethylgallium	1081
A.W. Saxler, P. Kung, X.R. Zhang, D. Walker, J. Solomon, W.C. Mitchel and M. Razeghi	
ODMR Studies of AS-Grown and Electron-Irradiated GaN and AlN	1087
G.D. Watkins, M. Linde, P.W. Mason, H. Przybylinska, C. Bozdog, S.J. Uftring, V. Härle, F. Scholz, W.J. Choyke and G.A. Slack	
Electrical and Optical Characterization of Defects in GaN Generated by Ion Implantation	1093
D. Haase, M. Burkard, M. Schmid, A. Dörnen, H. Schweizer, H. Bolay and F. Scholz	
Implantation Doping and Hydrogen Passivation of GaN	1099
A. Burchard, M. Deicher, D. Forkel-Wirth, E.E. Haller, R. Magerle, A. Prospero, A. Stötzler and the ISOLDE Collaboration	
Electrically and Optically Detected Magnetic Resonance in GaN-Based LEDs	1105
W.E. Carlos	
Donor-Acceptor Pair Transitions in GaN	1113
K. Kornitzer, M. Mayer, M. Mundbrod, K. Thonke, A. Pelzmann, M. Kersting and R. Sauer	
AB Initio Studies of Atomic-Scale Defects in GaN and AlN	1119
T. Mattila and R.M. Nieminen	
Photoluminescence Dynamics in the Near Bandgap Region of Homoepitaxial GaN Layers	1125
K. Korona, P. Bergman, B. Monemar, J.M. Baranowski, K. Pakula, I. Grzegory and S. Porowski	
Zeeman Study of the 0.9 eV Emission in AlN and GaN	1131
P. Thurian, I. Loa, P. Maxim, K. Pressel, A. Hoffmann and C. Thomsen	
A First-Principles Study of Mg-Related Defects in GaN	1137
K.J. Chang and S.G. Lee	
Impact of Radiation-Induced Defects on the Yellow Luminescence Band in MOCVD GaN	1143
V.V. Emtsev, V.Y. Davydov, I.N. Goncharuk, E.V. Kalinina, V.V. Kozlovski, D.S. Poloskin, A.V. Sakharov, N.M. Shmidt, A.N. Smirnov and A.S. Usikov	
On the Origin of the Yellow Donor-Acceptor Pair Emission in GaN	1149
M. Godlewski, V.Y. Ivanov, A. Kamińska, H.Y. Zuo, E.M. Goldys, T.L. Tansley, A. Barski, U. Rossner, J.L. Rouviere, M. Arlery, I. Grzegory, T. Suski, S. Porowski, P. Bergman and B. Monemar	
Blue Emission in Mg Doped GaN Studied by Time Resolved Spectroscopy	1155
R. Seitz, C. Gaspar, T. Monteiro, E. Pereira, M. Leroux, B. Beaumont and P. Gibart	
GaN Doped with Sulfur	1161
A.W. Saxler, P. Kung, X.R. Zhang, D. Walker, J. Solomon, M. Ahoujja, W.C. Mitchel, H.R. Vydyanath and M. Razeghi	
Identification of Iron Transition Group Trace Impurities in GaN Bulk Crystals by Electron Paramagnetic Resonance	1167
P.G. Baranov, I.V. Ilyin and E.N. Mokhov	
Local Vibrational Modes at Transition-Metal Impurities in Hexagonal AlN and GaN Crystals	1173
C. Göbel, C. Schrepel, U. Scherz, P. Thurian, G. Kaczmarczyk and A. Hoffmann	
Local Vibrational Modes at As_N in Cubic GaN: Comparing Ab-Initio Calculations to a Semi-Empirical Model	1179
K. Petzke, C. Göbel, C. Schrepel, P. Thurian and U. Scherz	

A Codoping Method in GaN Proposed by Ab Initio Electronic-Structure Calculations	1185
T. Yamamoto and H. Katayama-Yoshida	
Photoluminescence of Donor Acceptor Pair Transitions in Hexagonal and Cubic MBE-Grown GaN	
J. Krüger, D. Corlatan, C. Kisielowski-Kemmerich, Y. Kim, R. Klockenbrink, G.S. Sudhir, M. Rubin and E.R. Weber	1191
Raman Scattering from Defects in GaN	
H. Siegle, A. Kaschner, P. Thurian, A. Hoffmann, I. Broser and C. Thomsen	1197
Structural and Electrical Properties of Threading Dislocations in GaN	
J. Elsner, R. Jones, P.K. Sitch, T. Frauenheim, M.I. Heggie, S. Öberg and P.R. Briddon	1203
Defects Analysis in Strained InAlAs and InGaAs Films Grown on (111)B InP Substrates	
N. Bécourt, J.C. Ferrer, F. Peiró, A. Cornet, J.R. Morante, P. Gorostiza, G. Halkias, K. Michelakis and A. Georgakilas	1211
Irradiation Induced Lattice Defects in $In_{0.53}Ga_{0.47}As$ Pin Photodiodes	
T. Kudou, H. Ohyama, J. Vanhellemont, E. Simoen, C. Claeys, Y. Takami, A. Fujii and H. Sunaga	1217
Acceptor-Hydrogen Interaction in InAs	
A. Burchard, J.G. Correia, M. Deicher, D. Forkel-Wirth, R. Magerle, A. Prospero, A. Stötzler and the ISOLDE Collaboration	1223
Electroluminescence of III-Nitride Double Heterostructure Light Emitting Diodes with Silicon and Magnesium Doped InGaN	
A.W. Saxler, K.S. Kim, D. Walker, P. Kung, X.R. Zhang, G.J. Brown, W.C. Mitchel and M. Razeghi	1229
Effect of Neutron Irradiation on Ga-Based Semiconductors	
L.C. Damonte, F.J. Navarro, J.L. Ferrero, A. Segura and V. Muñoz	1235
Polaron Coupling for Sulphur Impurity in GaSb	
P. Kaczor, A.J. Zakrzewski, L. Dobaczewski, Z. Kaliński, A.M. Gerrits and J. Perenboom	1241
Resonant Interaction Between Local Vibrational Modes and Extended Lattice Phonons in AlSb	
M.D. McCluskey, E.E. Haller, W. Walukiewicz and P. Becla	1247
Defect Reactions in Low Temperature Electron Irradiated AlAs Investigated by Measurements of the Lattice Parameter	
A. Gaber, H. Zillgen, P. Ehrhart, P. Partyka and R.S. Averback	1253
Transition from Tunneling to Poole-Frenkel Type Transport in Aluminum-Nitride	
R. Schwarz, J.J. Sun, R. Rocha, E. Morgado and P. Freitas	1259
Growth Surface Dependence of Cathodoluminescence of Cubic Boron Nitride	
H. Kanda, A. Ono, Y. Suda and K. Era	1265
N-Vacancy Defects in c-BN and w-BN	
R. Mota, P. Piquini, V. Torres and A. Fazzio	1275
Multiphonon-Assisted Tunnel Ionisation of Deep Impurities in High-Frequency Electric Field	
I.N. Yassievich and V.I. Perel	1281
Long-Range Lattice Relaxation for Donor Centers in Supercell Method	
S. Bednarek and J. Adamowski	1287
Decay Kinetics of Growth-Induced Alignment of the First Neighbor Shell of C_{As} in Al_xGa_{1-x}As	
J.A. Zhou, C.Y. Song, J.-. Zheng, M. Stavola, B.V. Cockeram and S.J. Pearton	1293
Plausible Evidence of Existence of Deep Acceptors in Si δ-Doped AlGaAs	
K. Takarabe, N. Okada, K. Ohmura and H. Ohkura	1299
Magneto-Optical and Magnetic Resonance Investigations of Intrinsic Defects in Electron-Irradiated n-Type Al_xGa_{1-x}As	
K.H. Wietzke, M.V.B. Pinheiro, F.K. Koschnick, K. Krambrock and J.M. Spaeth	1303
Gallium Interstitials in GaAs/AlGaAs Heterostructures Investigated by Optically and Electrically Detected Magnetic Resonance	
T. Wimbauer, M.S. Brandt, M.W. Bayerl, M. Stutzmann, D.M. Hofmann, Y. Mochizuki and M. Mizuta	1309
ODMR Investigations of Ge Acceptors in p-Type Al_{0.4}Ga_{0.6}As	
M.V.B. Pinheiro, K. Krambrock, A.S. Chaves, K.H. Wietzke, F.K. Koschnick and J.M. Spaeth	1315

Inverted Charge States of Anion and Cation-Site Vacancies in Zinc Blende Semiconductors: Theory	1321
D.J. Chadi	
Degradation in II-VI Laser Diodes	1329
K. Nakano and A. Ishibashi	
Defect Characterization of II-VI Compound Semiconductors Using Positron Lifetime Spectroscopy	1335
G. Tessaro and P. Mascher	
Defect Structures in Heavily In-Doped II-VI Semiconductors	1341
V. Ostheimer, T. Filz, J. Hamann, S. Lauer, D. Weber, H. Wolf and T. Wichert	
The Role of Cation Vacancy in Compensation of II-VI Compounds - Example of Cu in CdS	1347
U.V. Desnica, I.D. Desnica-Franković, R. Magerle, A. Burchard and M. Deicher	
Experimental Evidence for the Two-Electron Nature of In-Related DX States in CdTe	1353
C. Skierbiszewski, P. Wiśniewski, Z. Wilamowski, W. Jantsch and G. Karczewski	
Nature of Dislocation-Related Deep Level Defects in CdS	1359
A.A. Istratov and O.F. Vyvenko	
NMR Study of Carrier States and Trapping Complexes in the Transparent Conductor ZnO:M_{III}	1365
W.W. Warren, N. Roberts, R.P. Wang and A.W. Sleight	
Cathodoluminescence Study on the Hydrogenation of ZnO Luminescence	1371
T. Sekiguchi, N. Ohashi and Y. Terada	
Observation of Frenkel Pairs on Both Sublattices of Electron Irradiated ZnSe	1377
H. Zillgen and P. Ehrhart	
Interface Defects and their Effect on the Electrical Properties of ZnSe/GaAs Heterojunctions Grown by MBE	1383
D. Seghier, I.S. Hauksson, H.P. Gislason, K.A. Prior and B.C. Cavenett	
Donor Doping of ZnSe: Lattice Location and Annealing Behavior of Implanted Boron	1389
B. Ittermann, G. Welker, F. Kroll, F. Mai, K. Marbach, H. Ackermann, H.J. Stöckmann, E. Oldekop and W.-. Zeitz	
Determination of the Lattice Site of Nitrogen after Implantation into ZnSe	1395
K. Marbach, B. Ittermann, M. Füllgrabe, M. Heemeier, F. Kroll, F. Mai, P. Meier, D. Peters, H. Thiess, H. Ackermann, H.J. Stöckmann, W.-. Zeitz, H. Wenisch, D. Hommel and G. Landwehr	
Charge Transfer at Ti Ions in ZnTe	1401
H.R. Selber, P. Peka, H.-. Schulz, U.W. Pohl, J. Kreissl, B. Kaufmann and A. Dörnen	
Bistable Centers in CdMnTeSe:In and CdMnTe:Ga Crystals Studied by Light-Induced Gratings	1407
B. Koziarska-Glinka, M. Ponder, A. Suchocki, T. Wojtowicz and I. Miotkowski	
Deep Levels in Cd_{0.99}Mn_{0.01}Te:Ga	1413
J. Szatkowski, E. Placzek-Popko, K. Sierański, P. Fialkowski, A. Hajdusianek and B. Bieg	
Vacancy-Type Defects in Electron and Proton Irradiated II-VI Compounds	1419
S. Brunner, W. Puff, P. Mascher, A.G. Balogh and H. Baumann	
UV Enhanced and Solar Blind Photodetectors Based on Large-Band-Gap Materials	1425
A. Malik and R. Martins	
Lattice Relaxation of In Donors in CdF₂	1431
A. Suchocki, J. Rauluszkiwicz, J.M. Langer and B. Koziarska-Glinka	
Shallow Electron Centres in CdF₂:M³⁺ and Silver Halides	1437
C. Fu and K.S. Song	
EPR Investigation of Metastable Donor States in CdF₂:In, Ga	1443
Z. Wilamowski, J.E. Dmochowski and W. Jantsch	
Photoinduced Magnetism in CdF₂ with Bistable Donors: The Clue for the Negative U?	1449
J.M. Langer, A. Suchocki, R. Szymczak and M. Baran	
Evidence of Metastable Deep Acceptors in AgGaS₂ from Time-Resolved Emission	1455
I.-. Choi and P.Y. Yu	
A Positron Lifetime Study of Lattice Defects in Chalcopyrite Semiconductors	1461
M.S. Al-Kotb, P. Peykov, W. Puff and G. Bischof	
Magnetooptical Characterization of CuIn(Ga)Se₂	1467
B.K. Meyer, M. Wagner, I. Dirnstorfer, D.M. Hofmann and F. Karg	

Defects Spectroscopy in β-Ga₂O₃ B.K. Meyer, U. Leib, A. Hofstätter, C. Krummel and D. Kohl	1473
Bistability of Oxygen Vacancy in Silicon Dioxide A. Oshiyama	1479
Energy Transfer Processes at Erbium Ions in Silicon J. Michel, J. Palm, T. Chen, X.J. Duan, E. Ouellette, S.H. Ahn, S.F. Nelson and L.C. Kimerling	1485
Energy Transfer Rate Between Erbium 4f Shell and Si Host A. Taguchi, K. Takahei, M. Matsuoka and S. Tohno	1491
Photoluminescence Study of Erbium in Silicon with a Free-Electron Laser I. Tsimperidis, T. Gregorkiewicz, H.H.P.T. Bekman, C.J.G.M. Langerak and C.A.J. Ammerlaan	1497
Direct Evidence for Stability of Tetrahedral Interstitial Er in Si up to 900°C U. Wahl, J.G. Correia, G. Langouche, J.G. Marques, A. Vantomme and the ISOLDE Collaboration	1503
Photo- and Electroluminescence of Erbium-Doped Silicon S. Lanzerstorfer, M. Stepikhova, J. Hartung, C. Skierbiszewski and W. Jantsch	1509
Donor Centers in Er-Implanted Silicon V.V. Emtsev, B.A. Andreev, D.S. Poloskin, N.A. Sobolev and E.I. Shek	1515
Structural Defects and Photoluminescence in Dislocation-Rich Erbium-Doped Silicon V.I. Vdovin, N.A. Sobolev, E.M. Emelyanov, O.B. Gusev, E.I. Shek and T.G. Yugova	1521
Influence of Fabrication Conditions on Properties of Si:Er Light-Emitting Structures N.A. Sobolev, A.M. Emel'yanov, Y.A. Nikolaev, K.F. Shtel'makh, Y.A. Kudryavtsev, V.I. Sakharov, I.T. Serenkov, M.I. Makovijchuk and E.O. Parshin	1527
High Temperature Luminescence Due to Er in Porous Si M. Stepikhova, W. Jantsch, G. Kocher, M. Schoisswohl, J.L. Cantin and H.J. von Bardeleben	1533
Electron Paramagnetic Resonance of Erbium in Bulk Silicon Carbide Crystals P.G. Baranov, I.V. Ilyin and E.N. Mokhov	1539
1.54 μm Luminescence in Er and Er+O Implanted 6H SiC A. Kozanecki, W. Jantsch, S. Lanzerstorfer, B.J. Sealy and S. Jackson	1545
Erbium Related Defects in Gallium Arsenide A.R. Peaker, F. Coppinger, H. Efeoglu, J.H. Evans-Freeman, D.K. Maude, J.C. Portal, P. Rutter, K.E. Singer, A. Scholes and A.C. Wright	1551
Electron Spin Resonance of Er-Oxygen Complexes in GaAs T. Ishiyama, E. Katayama, K. Takahei, A. Taguchi and K. Murakami	1559
Er Centers in GaAs Studied by Optical Spectroscopy Under Hydrostatic Pressure R.A. Hogg, A. Taguchi and K. Takahei	1565
EXAFS Measurement on Local Structure Around Erbium Atoms Doped in GaAs with Oxygen Co-Doping M. Tabuchi, H. Ofuchi, T. Kubo, K. Takahei and Y. Takeda	1571
Luminescence and Annealing Studies of Er-Implanted GaN with and without Oxygen Co-Doping E. Silkowski, Y.K. Yeo, R.L. Hengehold and L.R. Everitt	1577
Er-Luminescence in MBE-Grown AlGaAs O.B. Gusev, E.K. Lindmark, J.P. Prineas, M.S. Bresler, G. Khitrova, H.M. Gibbs, I.N. Yassievich, B.P. Zakharchenya and V.F. Masterov	1583
Crystal-Field Transitions of Nd³⁺ and Er³⁺ in Perovskite-Type Crystals M. Dietrich, P. Thurian, I. Loa, S. Gronemeyer, A.P. Litvinchuk and C. Thomsen	1589
Excitation and De-Excitation of Erbium Ions in Semiconductor Matrices I.N. Yassievich, M.S. Bresler, O.B. Gusev and G. Khitrova	1595
Mechanism of Generation of F-F Radiation in Semiconductor Heterostructures G.G. Zegrya and V.F. Masterov	1601
Infrared Induced Emission From Silicon Quantum Wires N.T. Bagraev, E.I. Chaikina, W. Gehlhoff, L.E. Klyachkin, I.I. Markov and A.M. Malyarenko	1607
Acceptor States in Boron Doped SiGe Quantum Wells K. Schmalz, M.S. Kagan, I.V. Altukhov, K.A. Korolev, D. Orlov, V.P. Sinis, S.G. Tomas, K.L. Wang and I.N. Yassievich	1613

Coulomb Interaction between Carriers Localized in InAs/GaAs Quantum Dots and on Point Defects	M.M. Sobolev, A.R. Kovsh, V.M. Ustinov, A.Y. Egorov, A.E. Zhukov, M.V. Maximov and N.N. Ledentsov	1619
Influence of Erbium Doping on Structure and Optical Properties of the InGaAs/GaAs Superlattices	L.G. Gerchikov, V.F. Masterov, T.R. Stepanova, H.M. Gibbs, G. Khitrova and N.N. Faleev	1625
Defect Formation During Laser Induced Intermixing of GaAs/AlGaAs Multiple-Quantum-Well Structures	N.H. Ky	1631
Localized Epitaxy for Vertical Cavity Surface Emitting Laser Applications	M. Erdtmann, S. Kim and M. Razeghi	1637
The Long Wavelength Luminescence Observation from the Self-Organized InGaAs Quantum Dots Grown on (100) GaAs Substrate by Metalorganic Chemical Vapor Deposition.	S. Kim, M. Erdtmann and M. Razeghi	1643
Deep Hole Traps in Be-Doped $\text{Al}_{0.5}\text{Ga}_{0.5}$ As MBE Layers	J. Szatkowski, E. Placzek-Popko, K. Sierański and O.P. Hansen	1653
Nanotubes and Pinholes in GaN and their Formation Mechanism	Z. Liliental-Weber, Y. Chen, S. Ruvimov and J. Washburn	1659
Defect-Related Recombination Processes in Low-Dimensional Structures of ZnCdSe/ZnSe, CdTe/CdMnTe and GaAs/AlGaAs	M. Godlewski, D. Hommel, T. Wojtowicz, G. Karczewski, J. Kossut, K. Regiński, M. Bugajski, P. Bergman and B. Monemar	1665
Study of Hole Traps in p-Type ZnSe and ZnSSe Epilayers by DLTS and Admittance Spectroscopy	I.S. Hauksson, D. Seghier, H.P. Gislason, K.A. Prior and B.C. Cavenett	1671
Auger-Type Nonradiative Recombination Processes in Bulk and in Quantum Well Structures of II-VI Semiconductors Containing Transition Metal Ions	M. Godlewski, M. Surma, A.J. Zakrzewski, T. Wojtowicz, G. Karczewski, J. Kossut, P. Bergman and B. Monemar	1677
Spin-Dependent Processes in Self-Assembly Impurity Quantum Wires	N.T. Bagraev, W. Gehlhoff, L.E. Klyachkin, A.M. Malyarenko and A. Näser	1683
Comparison between AS-Grown and Annealed Quantum Dots Morphology	J.C. Ferrer, F. Peiró, A. Cornet, J.R. Morante, T. Utzmeier, G. Armelles and F. Briones	1689
EPR Studies of Magnetic Superlattices	Z. Wilamowski, G. Springholz and W. Jantsch	1695
Er Diffusion and Er-Induced Ga-Al Interdiffusion in GaAs/AlGaAs Quantum Structures	M.S. Bresler, B.Y. Ber, O.B. Gusev, E.K. Lindmark, J.P. Prineas, H.M. Gibbs, G. Khitrova, V.F. Masterov, I.N. Yassievich and B.P. Zakharchenya	1701
Ground and Excited States of D⁻ Centres in Semiconductor Quantum Dots	B. Szafran, J. Adamowski and B. Stébé	1707
Electron Spin Resonance Features of the P_{b1} Interface Defect in Thermal (100)Si/SiO₂	A. Stesmans and V.V. Afanas'ev	1713
Silicon Surface Defects: The Roles of Passivation and Surface Contamination	A.J. Reddy, T.A. Burr, J.K. Chan, G.J. Norga, J. Michel and L.C. Kimerling	1719
Heat-Treatment Induced Modifications of Porous Silicon	S. Dannefaer, C. Wiebe and D. Kerr	1725
Luminescence Due to Electron-Hole Condensation in Silicon-On-Insulator and its Application to Defect and Interface Characterization	M. Tajima, S. Ibuka and M. Warashina	1731
Deep Electronic States at the Inverted AlAs/GaAs Interface Under Different Growth Modes	P. Krispin, R. Hey, H. Kostial and K. Ploog	1737
TEM-Study of Frank Partial Dislocations in ZnSe/GaAs(001) Caused by Substrate-Preparation	H. Preis, T. Frey, T. Reisinger and W. Gebhardt	1743
Defect Formation and Electronic Transport at AlGaN/GaN Interfaces	L. Hsu, W. Walukiewicz and E.E. Haller	1749

Characterization of the Relaxation by Misfit Dislocations Confined at the Interface of GaN/Al₂O₃(0001) Studied by TEM	1755
S. Kaiser, H. Preis, O. Ambacher and W. Gebhardt	
Formation Kinetics of the Al-Related Shallow Thermal Donors: A Probe for Oxygen Diffusion in Silicon	1761
P. Kaczor, L. Dobaczewski, T. Gregorkiewicz and C.A.J. Ammerlaan	
Diffusion and Precipitation of Oxygen in Silicon Doped with Germanium	1767
L.I. Khirunenko, V.I. Shakhovtsov and V.V. Shumov	
The Influence of Isovalent Doping on Diffusion of Interstitial Oxygen in Silicon	1773
L.I. Khirunenko, Y.V. Pomozov, V.I. Shakhovtsov and V.V. Shumov	
EPR Evidence of Hydrogen-Enhanced Diffusion of Aluminum in Silicon	1777
Y.V. Gorelkinskii, B.N. Mukashev and H.P. Zeindl	
Segregation of Gold at Dislocations Confirmed by Gold Diffusion into Highly Dislocated Silicon	1783
H. Bracht, A. Rodriguez Schachtrup and I. Yonenaga	
Annealing of Low-Temperature Substitutional Gold in Silicon: Ring-Diffusion of Substitutional Gold in Silicon	1789
M. Morooka	
Rate Limiting Mechanism of Transition Metal Gettering in Multicrystalline Silicon	1795
S.A. McHugo, A.C. Thompson, M. Imaizumi, H. Hieslmair and E.R. Weber	
Intrinsic Point Defect Engineering in Silicon High-Voltage Power Device Technology	1801
N.A. Sobolev	
Influence of the Dislocation Loops on the Anomalous Diffusion of Fe Implanted into InP	1807
C. Frigeri, A. Carnera, B. Fraboni, A. Gasparotto, F. Priolo, A. Camporese and G. Rossetto	
Lithium Induced Vacancy Formation and its Effect on the Diffusivity of Lithium in Gallium Arsenide	1813
H.P. Gislason, K. Leosson, H. Svavarsson, K. Saarinen and A. Mari	
Ab-Initio Investigations on Diffusion of Halogen Atoms in GaAs	1821
T. Ohno, T. Sasaki and A. Taguchi	
Low Temperature Intrinsic Diffusion Coefficient of Lithium in GaAs	1827
K. Leosson and H.P. Gislason	
Low Temperature Impurity Diffusion into Large-Band-Gap Semiconductors	1833
N.T. Bagraev, A.A. Gippius, L.E. Klyachkin and A.M. Malyarenko	
Background Doping Effects on Zn Diffusion in GaAs/AlGaAs Multiple-Quantum-Well Structures	1839
N.H. Ky	