

Table of Contents

The Preparation and Analysis of Active Layers Prepared by Si⁺ through Si₃N₄ Implantation into Si GaAs/Cr/	
L. Duricek	1
Vanadium-Doped Bulk and Epitaxial GaAs, Studied by Photoluminescence and Photoconductivity	
P.S. Gladkov and K.B. Ozanyan	7
The Use of Anisotropically Etched Gallium Arsenide Surfaces in Optoelectronics	
T.J. Gorbach, L.A. Matveeva, S.V. Svechnikov and Y.A. Tkhorik	13
Real Structure of AS-Grown GaAs Crystals	
R. Gleichmann, H. Menniger and H. Raidth	17
Growth of GaAs Epitaxial Layers at Low Temperatures	
I. Gyúró, I. Mészáros and K. Somogyi	23
Study of Selective Zinc Diffusion in InP	
E. Hájková, K. Starosta and J. Kohout	29
Deposition Methods for Dielectric Films	
T. Jung	33
Distribution of Free Carrier Concentration across N-Type LEC-InP Wafers	
A. Knauer, R. Sprenger and U. Zeimer	37
The Study of the Interface in GaAs-Ge and GaAs-Ge_{1-x}Si_x Heterosystems	
L.A. Matveeva and Y.A. Tkhorik	41
LPE Growth of GaInAsP/InP DH	
D. Nohavica, J. Těminová, D.A. Tuan, J. Kortán and J. Zelinka	45
Crystal Growth of Si-GaAs and Its Investigation after Heat Treatment	
W. Orlowsky, A. Hruban, M. Kwiecien, K. Nowysz and S. Strzelecka	51
The Application of GaAs Epitaxy from the Ga-HCl-AsH₃-H₂ System to Micro-Wave Device Technology	
M. Panek, R. Korbutowicz, M. Ratuszek and M. Tlaczala	59
Dopant Distribution and Electrical Activation of Si Implanted GaAs by Short Time Annealing	
D. Panknin, E. Wieser, R. Grötzschel, C.E. Richter, M. Gericke, Y.V. Fattachov and I.B. Khaibullin	63
Influence of Substrate Defect Structure on the Structure Perfection of Heteroepitaxial Layers GaAs_{1-x}P_x/GaAs (x=0.4)	
M. Pawłowska and A. Hruban	69
The Influence of Growth Conditions on Electrical and Optical Properties of High Quality LPE GaAs Layers	
J. Raczynska, W. Lewandowski and M. Bugajski	75
Growth of InGaAsP/InP Heterostructures for Optoelectronic Application	
V. Rakovics, T. Görög and E. Lendvay	81
The Use of Ga-As-Bi-Solutions in the Preparation of GaAs Structures for Mesfet Technology	
M. Ratuszek, M. Panek and M. Tlaczala	85
Characterization of (Ga, In), (As, P)/InP-DHS by Means of IR-Microscopy, SEM Modes and Photoluminescence	
I. Rechenberg, U. Zeimer, R. Staske, R. Rimpler and G. Wagner	91
On Cr Behaviour during the VPE Growth of GaAs Epitaxial Layers	
K. Somogyi	95
Growth and Characterization of GaAs Single Crystals with Low Dislocation Density	
L. Stourac	101
Some Problems of Thickness Determination of Active Layer in InP/GaInAsP Heterostructures with the Doping and/or Composition Profiling Method	
J. Walachová, J. Kohout and L.A. Matveeva	111
Short Time Annealing of Ion Implanted GaAs	
W. Wesch, P. Ressel, D. Stock, E. Wendler and G. Götz	115

Characterization of (Ga, In)As/InP Epitaxial Structures	123
A. Zoul and J. Stejskal	
A New Method of Analysis of Solute Electromigration and Electrotransport in III-V Solutions	129
Z. Surowiak and Z.R. Źytkiewicz	
Coordinate Dependence of the Impact Ionization Coefficients of Holes and Electrons in a Variable-Gap p-n Structure	133
A.N. Baranov, T.N. Danilova, A.N. Imenkov, B.V. Tsarenkov, J.M. Shernyakov and Y.P. Yakovlev	
Chaotic Current Oscillations in Cr-Compensated GaAs	137
Z.N. Bartashevich, Y.K. Pozhela, K.A. Pyragas, A. Tamaševičius and Y.K. Ulbikas	
On the Electrical Properties of Semi-Insulating GaAs	143
J. Betko, K. Měřinský, A. Nemcsics and P. Sviszt	
DLTS, ODLTS and MCTS Study of Deep Traps in the VPE GaAs Schottky Barriers	147
F. Dubecsky, J. Safránková, B. Olejniková and B. Szentpáli	
On the Influence of Dislocations on GaAs_{1-x}P_x Graded Layers	153
W. Erfurth, R. Gleichmann and J. Heydenreich	
Microwave Absorption Spectroscopy of Deep Levels in Semiconductors	159
G. Ferenczi, D.L. Huber, W. Jantsch and G. Brunthaler	
Deep Levels in GaAs Prepared by VPE	167
P. Hubík, V. Šmíd, N.A. Sobolev, Y.V. Zhilyaev and N.I. Kuznetsov	
Electron Paramagnetic Resonance of Electron-Irradiated GaAs	173
R. Jabłoński and L. Kaniowski	
Optical Studies of Nickel Impurity in GaP	177
M. Jezewski, Z. Liro and J.M. Baranowski	
On a Temperature Activated Defect Reaction at the Isotype Al_{0.05}Ga_{0.95}As/Al_{0.35}Ga_{0.65}As Interface Grown by LPE	181
P. Krispin, G. Beister and J. Maege	
Fine Structure of EL2 Absorption in GaAs	195
W. Kuszko, M. Jezewski, M. Kaminska and J.M. Baranowski	
Electron Irradiation Induced Structure in III-V Semiconductors Studied by Positron Lifetime Spectroscopy	199
L. Liszkay, L. Bottyán and A.G. Balogh	
Spatially Resolved Luminescence of LEC Grown GaAs Crystals by Automatic Laser Scanning	207
J. Oswald and J. Pastrňák	
Universal Position-Changing Trend of 3d-Impurity Levels (0+) and (0-) in Semiconductors and Exciton Localization on 3d Impurities	211
V.I. Sokolov	
Theory of Auger Recombination Involving Traps in A³B⁵ Semiconductors: Application to States with One and Two Bound Particles in GaSb	215
M.V. Strikha and I.N. Yassievich	
Rare Earth Impurity Luminescence in Gallium Arsenide And Gallium Phosphide	219
V.V. Ushakov, N.A. Rzakuliev, V.M. Konnov, V.N. Jakimkin and A.A. Gippius	
Metastability of EL2 Defects in GaAs	225
J.P. Walczak, P. Trautman, M. Kaminska and J.M. Baranowski	
Investigation of Defects in Ion Implanted GaAs by Means of RBS and Optical Transmission Spectroscopy	231
W. Wesch, E. Wendler and G. Götz	
Antistructure Defects in Neutron-Irradiated GaAs - A Comparison with EL2 Defects in As-Grown Crystals	239
J. Wosik, M. Palczewska and M. Kaminska	
Luminescence of Manganese - Doped InGaAs and InAsSbP Alloys	243
N.V. Zotova, S.A. Karandashev, B.A. Matveev, N.M. Stus' and G.N. Talalakin	
The Nature of Excess Currents in GaAlSb(As) Diodes of "Resonant" Composition	249
I.A. Andreev, A.N. Baranov, O.V. Kurnosova, M.P. Mikhailova and Y.P. Yakovlev	
Radiation Ordering Effects at GaAs Superfaces	253
O.Y. Borkovskaya, V.I. Vovnenko, H.L. Dmitruk, D.V. Korbutyak, E.G. Lashkevich and V.G. Litovchenko	

Contact Resistance Profiling - An Effective Tool for Failure Analysis of GaAs-GaAlAs Layer Structures	257
L. Csontos and G. Hoffmann	
Analysis of Non-Linear Light-Current Characteristics and Anomalous Pulse Responses of Semiconductor Lasers	263
I. Habermayer	
Generation of Schottky Metal Pattern on GaAs by the Electron Beam Resist Lift-off Technique	269
S. Hähle, D. Becker and N. Franke	
I-V Peculiarities in GaAs-CrAu Schottky and GaAs-Au Ion Mixed Contacts	273
Z.J. Horváth, B. Pécz, P. Tüttö, E.N. Jároli, M. Németh-Sallay and I. Gyűró	
PdGe Non-Alloyed Contact to n-GaAs	277
E. Kamińska, A. Piotrowska, A. Barcz, A. Turos and R. Pietrak	
Study of High Sensitive GaAs Vertical Field-Effect Transistors	283
V.I. Korol'kov, N. Rakhimov, T.S. Tabarov and B.S. Yavich	
Thermal and Temperature Properties of 1.3 μm InGaAsP/InP Stripe Lasers	287
J. Kortán and J. Zelinka	
Modulation Properties of 1.3 μm Laser Diodes	293
L. Kratena and K. Zdanský	
Technology and Electrical Characterization of GaAs Mesfet Structures	297
T. Lalinsky, D. Gregusová, I. Mostenicky and K. Merinsky	
Study of Dark Current in Ga_{1-x}In_xAs/GaAs Diodes	303
E. Malacký, J. Novák, M. Morvic and P. Kordoš	
The Dependence of InGaAs Photodiode Characteristics on the Composition of the Ternary	307
J. Novák, L. Malacký, M. Morvic and P. Kordoš	
On the Interaction of Au with GaP	311
B. Pécz, E.N. Jároli, R. Veresegyházy, I. Mojzes and L. Petrás	
Degradation Processes in Visible GaP and GaAsP LED's	317
A.S. Popov	
Enhanced Diffusion of Zn along the SiO₂Mask-GaAs Interface	331
J. Pfeifer and F. Koltai	
Efficient Metallization Scheme for GaAs Microacoustic Devices	337
H.J. Rohde and M. Scharmach	
Some Properties of GaAs Schottky Barrier Photodetectors for 0,82 μm Wavelength Applications	343
J. Safránková and P. Kordoš	
Impedance of GaAs-GaAsP- and GaP-Electrolyte Interfaces in the 10 kHz - 100 kHz Frequency Range	347
M. Somogyi	
GaAs Mesfet For S-Band Frequencies	353
M. Szreter, B. Boratyński, B. Jankowski, A. Radziszewski, M. Ratuszek and T. Skrabka	
(Cr)-(Pt)-(Au)-Metallization as an Ohmic Contact System of III-V Semiconductor Surfaces (GaAs, InP)	357
K. Vogel, D. Maly and U. Schade	