

Table of Contents

	page
Preface.....	iii
Symposium Organizers	iv
*GaInNAs/GaAs: A Novel Material System for Many Applications	1
<i>C.W. Tu, M. Sopanen, and H.P. Xin</i>	
*MOCVD Growth of AlGaInN for UV Emitters	8
<i>J. Han and M. Crawford</i>	
Properties of Semi-Insulating GaAs:Fe Grown by Hydride Vapour Phase Epitaxy	15
<i>E. Rodriguez Messmer, D. Soderstrom, P. Hult, S. Marcinkevicius, S. Lourdudoss, and D.C. Look</i>	
Growth Mechanism in the Multiple Buffer Layer of GaN on Sapphire by Organometallic Vapor Phase Epitaxy	20
<i>C.-C. Yang, M.-C. Wu, Y.-C. Hung, and G.-C. Chi</i>	
In-Situ Monitoring of Crystal Growth Using Specular Ion Current Oscillations	25
<i>P.M. Deluca, K.C. Ruthe, and S.A. Barnett</i>	
*Various Spectroscopic Studies of Single Quantum Dots Using Highly Sensitive Near-Field Scanning Optical Microscope	36
<i>T. Saiki</i>	
Characterizations of Ion-Implanted GaAs Substrates by Optically Excited Terahertz Radiation	50
<i>G.-R. Lin and C.-L. Pan</i>	
*Measurement Services for Optoelectronics at the National Institute of Standards and Technology	57
<i>S. Bruce</i>	
Fabrication and Characterization of Triangular Shaped InGaAs/GaAs Quantum Wire Structures Using Selective Area Epitaxy	64
<i>S.-I. Kim, Y.K. Park, Y.T. Kim, H.H. Tan, and C. Jagadish</i>	

Table of Contents	page
The Structural, Chemical and Electronic Properties of a Stable GaS/GaAs Interface	70
<i>H.-T. Hu, X.-A. Cao, X.-M. Ding, and X.-Y. Hou</i>	
Application of Impedance Technique to Characterize Anodic Oxides on PbSe Surfaces	79
<i>D.G. Ebling, H. Meincke, and J. Heinze</i>	
*Formation of P-type Gallium Nitride with Zinc Ion Implantation	88
<i>C.C. Chang, G.C. Chi, and J.R. Dun</i>	
*Deuterium Introduction Into 6H and 3C-SiC Crystals and Thermal Stability with Annealing	100
<i>J.M. Zavada, R.G. Wilson, S.J. Pearton, B.K. Lee, A.J. Steckl.</i>	
*Development of Multi-Functional Ohmic Contacts for both n and p-GaAs	108
<i>M. Ogura, M. Murakami, M. Nakamura, and M. Wada</i>	
*Interfacial Reactions between Metals and Gallium Nitride	114
<i>M. Ahonen, B. Liu, A. Davydov, E. Ristolainen, and P. Holloway</i>	
*Electronic Books: Requirements for Displays and Storage	128
<i>V. McCrary, and J. Roberts</i>	
Reduced Cavity Loss for Ultra-Low Threshold Vertical Cavity Surface Emitting Lasers	140
<i>D.L. Huffaker, Z. Zou, and D.G. Deppe</i>	
Polarized Response in Normal Incidence InAs Quantum Dot Infrared Photodetectors	152
<i>S. Maimon, V. Immer, E. Finkman, G. Bahir, S. E. Schacham, O. Gauthier-Lafaye, S. Herriot, F. H. Julien, M. Gendry, and J. Brault</i>	
Dual-Side Wafer Processing and Resonant Tunneling Transistor Applications ..	158
<i>J. Moon, J. Simmons, J. Wendt, V. Hietala, J. Reno, W. Baca, and M. Blount</i>	

Table of Contents	page
*Optimization of InGaAs/InP DHBT Devices for Use in High Speed Circuits ...	169
<i>R.F. Kopf, Y.-C. Wang, R.A. Hamm, R.W. Ryan, A. Tate, M.A. Melendes, R. Pullela, G. Georgiou, J.-P. Mattia, Y. Baeyens, H.-S. Tsai, and Y.-K. Chen</i>	
Comparison of InP/InGaAs HBT and InAlAs/InGaAs HBT for ULP Applications	177
<i>P.C. Chang, A.G. Baca, J.F. Klem, M.J. Hafich, C.I.H. Ashby, and V.M. Hietala</i>	
Base Pushout and High Current Effects in InP-based Pnp Heterojunction Bipolar Transistors	185
<i>S. Datta, K.P. Roenker, and M.M. Cahay</i>	
SiGe Heterojunction Bipolar Transistors with 156 GHz Transit Frequency	198
<i>A. Gruhle, H. Kibbel, A. Schurr, D. Behammer, and U. Koenig</i>	
*High-Efficiency, Low Voltage Compound Semiconductor Devices for Microwave and MM-Wave Power Amplifiers	201
<i>L. Sloan, V. Hietala, P.C. Chao, and W. Kong</i>	
Hot-Electron-Induced Degredation of High Efficiency AlGaAs/InGaAs/AlGaAs PHEMTs	208
<i>Y. Tkachenko, A. Klimashov, C. Wei, Y. Zhao, M.Hua, D. Bartle</i>	
Room Temperature Single Electron Transistor by AFM Nano-Oxidation Process: Coincidence in Experimental and Theoretical Results	215
<i>K. Matsumoto, Y. Gotoh, T. Maeda, and J. Harris</i>	
GaNP/GaAs Compatible E/D-Mode d-HEMT's	218
<i>H.R. Chen, M.-Y. Wu, P.L. Cheng, G.Y. Lai, and W.S. Lour</i>	
Sidewall Effects on dc and ac Performance of III-V Compound FET's	224
<i>H.R. Chen, G.L. Huang, P.L. Cheng, G.Y. Lai, and W.S. Lour</i>	
Self-Aligned 0.2 - 0.6 μm T-gate Microwave FET's	232
<i>W.S. Lour, Y.M. Shih, G.Y. Lai, P.L. Cheng, and H.R. Chen</i>	
*High Quality AlN and GaN on Si(111) by MBE with Ammonia	238
<i>S. Nikishin, N. Faleev, S.N.G. Chu, and H. Temkin</i>	

Table of Contents	page
Author Index	243
Subject Index	245