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Proceedings

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Ole Hansen
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Kari Leinonen, Hannu Ronkainen, and Mikael Andersson

O1.6 "DLTS Technique for the Characterization of Recombination Centers in High Resistivity Semiconductors"
Einar Ö.Sveinbjörnsson, Gert I. Andersson, and Olof Engström

Poster Session

P1.1 "The Photoluminescence Facility at the MBE Center in Copenhagen"
Erling Veje

P1.2 "Novel Laser Beam Mask Making Facility"
Arto Salin

P1.3 "Mobility in Conducting Polymer Transistors"
J.Paloheimo, P.Kuivalainen, H.Stubb, and P.Yli-Lahti

P1.4 "Bilateral Recombination-Radiation Diagnostics of the Excess-Carrier Redistribution in a Transiently Operating GTO"
M.Lundqvist, H.Bleichner, J.Vobecky, and E.Nordlander

P1.5 "Simulations of Multicomponent Sputtering"
C.Nender, B.Gelin, V.Tvarozek, S.Berg, and J.P.Biersack

P1.6 "Substrate Temperature Measurements in Molecular Beam Epitaxy Using a Mechanical Probe"
M.Ekenstedt, T.G. Andersson, and H.Millqvist

P1.7 "A Double Layer Antireflection Coating for Thin Film Solar Cells"
Mikael Jargelius, Jonas Hedström, Arne Roos, and Lars Stolt

Session 2: Fundamental Semiconductor Physics:
Chairman: Emil Antoncik

Invited Talk
"Diffusion in Silicon"
Paul Fahey, Subu Iyer, and Gerry Scilla

O2.1 "A Novel Method for Characterizing a One-Dimensional Channel with the Use of Quantized Resistance"
U.Ekenberg and D.A. Wharam

Invited Talk
"Antisite Defects in Indium Phosphide"
Haflidi P. Gislason

O2.2 "Calculated Electronic Properties of Superlattices and Heterostructures"
N.E. Christensen

Invited Talk
"Carbon Related Defects in Silicon"
Johan Svensson
O2.3 "Optical Nonlinearities, Bistability and Switching in Semiconductors"
J.M.Hvam, C.Dörmfeld, and C.R.Paton

O2.4 "Identification of Band Gap States by DLTS on Radioactive Probes: The Case of Au and Pt in Silicon"
Jon Wulff Petersen and Jacob Nielsen

Invited Talk
"Hydrogen in Silicon"
Brian Bech Nielsen

O2.5 "A Study on Point Defect Generation During Silicidation"
U.Erlesand, M.Östling, B.G.Svensson, and P.Gas

O2.6 "Midgap Level in SiGe Alloys"
E.L.Hellqvist, V.Nagesh, and H.G.Grimmeiss

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Per Kringhøj and Axel Svane

P2.2 "Electronic Screening in a Triangular Well"
Hans Nielsen

P2.3 "Band-Edge Offset in AlxGa1-xAs/GaAs (0.3≤x≤1.0) Quantum Well Heterostructures"
Shuming Wang, Vladimir Kulakovskii, Weiquan Chen, Thorwald G.Andersson, and Johan Westin

P2.4 "Wave Function Dependence on the Parallel Wave Vector in Modulation-Doped Quantum Wells"
U.Ekenberg

P2.5 "On the Diffusion of As and Ge at High Donor Background Concentration"
K.Kyllesbech Larsen and A.Nylandsted Larsen

P2.6 "On the Electronic Structure of Implanted Semiconductors"
E.Antoncik

P2.7 "Rapid Thermal Annealing of High Concentration Mixed As/In and P/In-Implanted Silicon Single Crystals"
S.Yu.Shiryaev and A.Nylandsted Larsen

P2.8 "The Vortex Picture of the Quantum Hall Effect"
H.Bruus, E.B.Hansen, and O.P.Hansen

P2.9 "Rapid Thermal Annealing of Ge Implanted InP"
P.Kringhøj, V.V.Gribkovskii, and A.Nylandsted Larsen

P2.10 "Low Fluence Implantations in GaAs: A Mossbauer Spectroscopy Investigation of Individual and Overlapping Damage Cascades"
H.Andreasen, J.W.Petersen, and G.Weyer

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I.K.Kristensen
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H.P.Gislason and E.O.Sveinbjörnsson

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B.Mohadjeri and B.G.Svensson

P2.14 "Boron Lattice Diffusion in Bulk Cobalt Disilicide"

P2.15 "Electrical Characteristics of Silicon Ion Implanted Silicon"
S.Peterström and G.Holmén

P2.16 "Damage Processes in Silicon After Fast Heavy Ion Bombardment"
A.Hallén, P.Håkansson, and B.U.R.Sundqvist

P2.17 "Annealing Cycle of a Deep State Related to Hydrogen in Silicon"
B.Holm, K.Bonde Nielsen, and B.Bech Nielsen

P2.18 "Growth and Characterization of δ-Doping Structures in Silicon"
Wei-Xin Ni, Hui-Min Li, Mauro Sardela, Magnus Willander, and Göran V.Hanson

P2.19 "Electronic Structure of Sn and Ge Impurities in Group III-V Semiconductors"
Axel Svane

Session 3: Silicon Technology
Chairman: Sture Petersson

Invited Talk
"Defect-Related Junction Leakage in Advanced CMOS and BiCMOS Devices"
Alain Chantre, M.Ada-Hanifi, G.Giroult-Matlakowski, J.P.Gonchond, and A.Nouailhat

O3.1 "Basic Studies of the RIBE Process Applied to the MOS Gate Spacer Technology"
A.M.Barklund, H.-O.Blom, S.Berg, H.Norström, and A.Lindberg

O3.2 "Boron Doped LPCVD Polysilicon: Reversible Variations of Resistance During Low Temperature Cycling"
L.Evensen, B.S.Avset, R.Turan, and T.Finstad

Invited Talk
"Silicides: A Selective Overview"
F.M.d’Heurle

Invited Talk
"Trends in Semiconductor Micromechanics"
Bertil Hök

O3.3 "Evaluation of LPCVD-Grown PSG-Layers for Applications in Optics"
Päivi Heimala, Jaakko Aarnio, Ulrika Gyllenberg, and Hannu Ronkainen

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O3.4 "Formation of CoSi$_2$ on Polycrystalline Silicon by RTA"
Gyöző Drozdy, Hannu Ronkainen, and Ilkka Suni

O3.5 "Electrical Characterization of an Ultra-Shallow Diffused n*p-Junction in Silicon"
A. Söderbärg, O. Grelsson, and U. Magnusson

Invited Talk
"Silicon-to-Silicon Anodic Bonding"
Per Ohlickers and Anders Hanneborg

O3.6 "Electrical Properties of SOI-Material, Formed by Ion Implantation"
Rune Olofsson and Gillis Holmén

O3.7 "Characterization of a Self-Aligned Two Step RTP Titanium Disilicide MOS-Process; Etch Selectivity and Silicide Formation"
W. Kaplan, A. Lindberg, S-L. Zhang, M. Östling, and H. Norström

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K.B. Larsen and A. Nylandsted Larsen

P3.2 "Plasma Etching of Molybdenum Gate"
Sami Franssila

P3.3 "A Silicon Micromachined Punch Array"
Per Ohlickers and Helge Kristiansen

P3.4 "The Oxidation of Ge Implanted Si; Electrical Properties"
R. Turan and T.G. Finstad

P3.5 "Plasma Jet Dry Etching of Silicon Based Compounds"
A.M. Barklund, H.-O. Blom, and S. Berg

P3.6 "Investigations of the Current-Voltage Behaviour in a Combined Schottky-pn Diode"
U. Magnusson and H. Norde

P3.7 "Silicon-Silicon Direct Bonding, A Comparative Study on Bond Strengths"
Ylva Bäcklund, Anders Söderbärg, Jonas Tirén, and Lasse Tenerz

P3.8 "Device Simulation to Support IR-Measurement Methods for Power Device Characterization"
M. Schweigert and F. Masszi

P3.9 "Investigation of Silicon Etchrate in Cesium-Hydroxide with Respect to the Boron Concentration"
U. Lindberg and A. Söderbärg

P3.10 "Formation of Iron Disilicide on Amorphous Silicon as Compared with Formation on Bulk Silicon"
K. Bodén, U. Erlesand, and M. Östling
P3.11 "Simultaneous Formation of Contacts and Diffusion Barriers for VLSI by Rapid Thermal Silicidation on TiW"
H.Norström, K.Maex, J.Vanhellemont, G.Brijs, and W.Vandervorst

P3.12 "Mechanisms for Growth of Silicon Dioxide on Silicides of Elements of the Fourth Period"
L.Stolt, O.Thomas, and F.M.d'Heurle

P3.13 "Silicon Recrystallization in Silicide/Poly-Si MOS Gate Structures"
Stefan Nygren and Stefan Johansson

P3.14 "Formation of Nickel Disilicide on Evaporated and Ion Amorphized Silicon"
J.Linnros, B.Mohadjeri, B.G.Svensson, and M.Östling

P3.15 "CVD of W on a TaSi2/Si Structure"

P3.16 "The Influence of Oxygen on SiO2 Sputtering"
Harald Jacobsson and Gillis Holmén

P3.17 "A Needed Modification to the Deal and Grove Model of Silicon Oxidation"
Shi-Li Zhang and F.M.d'Heurle

P3.18 "ArF Laser Induced Photolytic CVD of Tungsten"
Péter Mogyorósi and Jan-Otto Carlsson

P3.19 "Low Pressure Selective Chemical Vapour Deposition of TiSi2"
Jan Engqvist and Jan-Otto Carlsson

Session 4: "Compound Semiconductor Technology"
Chairman: Jouni Heleskivi

Invited Talk
"Modern Growth Techniques for Epitaxial III-V Semiconductors"
J.R.Shealy

O4.1 "MBE-Overgrowth and the Application to a Phased Array Layer"
Kjetil Johannessen and Colin R.Stanley

O4.2 Program-change, please refer to paper P4.7

O4.3 "Critical Thickness of 2D to 3D Growth Mode Transition for InGaAs/GaAs Strained Layers Studied by TEM"
J.Y.Yao, T.G.Andersson, and G.L.Dunlop

Poster Session

P4.1 "Persistent Photoconductivity in GaAs/AlGaAs Heterostructures Measured by Contactless Corbino-Capacitance Technique"
O.P.Hansen, A.Kristensen, and H.Bruus

P4.2 "Sequential Resonant and Non-Resonant Tunneling in GaAs/AlGaAs Multiple Quantum Well Structures: High Field Domain Formation"
P.Helgesen and T.G.Finstad

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P4.3 "Surface Cleaning of CF₄ Plasma Etched GaAs(100) Substrate by Thermal Annealing in Hydrogen" 
J.K.Grepstad and R.W.Bernstein

P4.4 "XPS Investigation of the Ti/AlₓGa₁₋ₓAs(100) Interface" 
R.W.Bernstein, A.Borg, K.Johannessen, and J.K.Grepstad

P4.5 "CV- and IV-Measurements on the GaAs/AlₓGa₁₋ₓAs Heterojunction" 
K.Premaratne and T.G.Andersson

P4.6 "Growth of Strained Layer Superlattices" 
H.Østergaard, O.Leistiko, X.Song, W.J.Schaff, and L.F.Eastman

P4.7 "Growth and Characterization of Nearly Lattice Matched GaInAs on InP" 
Dan Birkedal

P4.8 "Observation of Resonant Tunneling in InSb/AlₓIn₁₋ₓSb Double Barrier Structures" 
Jan R.Söderström and Thorwald G.Andersson

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Chairman: Tapio Wiik

Invited Talk
"Supercomputer Simulation of Advanced Semiconductor Devices by Self-Consistent Monte Carlo Technique" 
T.A.Fjeldly, G.U.Jensen, B.Lund, T.Brudevoll, and M.S.Shur

O5.1 "Floor Plan Considerations in a Large Analog Circuit" 
Esko Räty and Jari Mutikainen

O5.2 "10 GHz D-Flip-Flop" 
Jesper Riishøj

O5.3 "Analytical Modeling of Heterostructure Field Effect Transistors" 
T.Steen, T.A.Fjeldly, and M.S.Shur

O5.4 "A CMOS VLSI Cell Library for Digital Signal Processors" 
Peter Nilsson and Mats Torkelsson

Invited Talk
"Modeling of Tunable Single-Frequency Lasers for Coherent Systems" 
H.Olesen, X.Pan, and B.Tromborg

O5.5 "A Fast Method for Parameter Extraction for MOS Transistors" 
Peter R.Karlsson and Kjell P.Jeppson

O5.6 "A Fully RTP Processed GaAs-MESFET" 
E.Sirén

O5.7 "Modeling of a p-JFET Radiation Detector" 
Kaj Grahn
O5.8 "Optical Nonlinearities in Multiple Quantum Well Hetero nipi Waveguides"
Carsten Thirstrup, P.Li Kam Wa, P.N.Robson, M.A.Pate, C.C.Button, and J.S.Roberts

Invited Talk
"Heterostructures: Backbone of Compound Semiconductor Device Physics"
Herbert Kroemer

Poster Session

P5.1 "Complex Contact Models in Multidimensional Semiconductor Device Simulation"
F.Masszi and K.Tarnay

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Ted Johansson and Andrej Litwin

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Hans Johansson, J.Yuan, and C.Svensson

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J.Gakkestad, P.Ohlickers, and H.Jakobsen

P5.5 "A Comparison Between Si/SiGe Heterojunction Bipolar Transistors and Si Bipolar Transistors in Operational Amplifiers"
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Jorma Koskinen and Ulrika Gyllenberg

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K.Andersson, P.Olofsson, L.Heijkenskjöld, R.Revsäter, C.Vieider, A.Rud, and W.Hermansson

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M.Ljungberg, H.Elderstig, P.Norlin, and M.Bakowski

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Ulf Gustafsson, Oskar Sönderhed, and Martin Ljungberg

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Marko Grönlund

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S.Eränen, M.Blomberg, G.Drozdy, M.Grönlund, and J.Kihamäki

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Magnus Karlsteen and Magnus Willander

P5.15 "Estimation of Maximum Frequency for Unity Power Transfer Ratio of HEMTs and MESFETs"
Qing Zhong Liu

P5.16 "Polysilicon Resistance-Ladder Accuracy in Data Converters"
L. Hanssen and R. Bjerknes

P5.17 "Fabrication of GaAs-AlGaAs HEMTs at ELAB-RUNIT/NTH"
Ulf P.I. Pedersen and Anton M. Bøifot

P5.18 "Reduction of the Threshold Current Density in Multi-Quantum-Well Lasers"
A. Ghiti, W. Batty, U. Ekenberg, and E. P. O'Reilly

P5.19 "A Silicon p'n Diode as Low Energy Particle Detector"
Geir A. Johansen

P5.20 "Measurements on a GaAs/AlGaAs Infra-Red Detector Showing a Negative Differential Resistance Behaviour"
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P5.21 "Optical DC and Transient Modeling of a GaAs Metal-Semiconductor-Metal Photodetector"
Mikael Andersson and Helena Pohjonen

P5.22 "Comparison Between Two Design Concepts for a Radar DSP Chip"
Erik Herts and Mats Torkelson

P5.23 "Monolithic Flow Sensor for Milliliter Per Minute Flow"
Canqian Yang, Henrik Søeborg, Otto Leistiko, Jens Branebjerg, Ejner Mose Hansen, Ole Søndergård Jensen, and Niels Gravgård Lauersen

* -not received before printing dead-line

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