
Contents

Articles

Freestanding GaN in HVPE by In-situ Etching of a ZnO Buffer Layer	3
Growth of a-plane GaN on r-plane Sapphire	11
3D InGaN/GaN Structures	19
GaN-Based Laser Diode Processing	27
GaN Nanorods and Nanotubes	35
Layer Design of Semiconductor Disk Lasers	41
VCSELs for Atomic Clocks	49
High-Power Single-Mode VCSELs	55
Integrated VECSELs	61
Investigations into Matrix-Addressable VCSEL Arrays	65
Polarization Division Multiplexed Data Transmisison	71
Bidirectional Optical Data Transmission	77
Particle Manipulation With an Integrated Optical Trap	85

Lists of Publications

Ph.D. Theses	93
Diploma and Master Theses	94
Semester Projects	95
Talks	96
Publications and Conference Contributions	99





- | | | |
|----------------------|----------------------|---------------------------|
| 1: Ilona Argut | 9: Peter Unger | 17: Rudolf Rösch |
| 2: Rainer Blood | 10: Ferdinand Scholz | 18: Alexander Kern |
| 3: Stephan Schwaiger | 11: Dietmar Wahl | 19: Kamran Forghani |
| 4: Thomas Wunderer | 12: Fernando Rinaldi | 20: Abdel-Sattar Gadallah |
| 5: Christine Bunk | 13: Ihab Kardosh | |
| 6: Frank Lipski | 14: Frank Demaria | |
| 7: Ahmed Al-Samaneh | 15: Rainer Michalzik | |
| 8: Mohamed Fikry | 16: Anna Bergmann | |

Missing in the picture:

Karl J. Ebeling, Sükran Kilic, Hildegard Mack, Jürgen Mähnß,
Gerlinde Meixner, Susanne Menzel, Wolfgang Schwarz, Josef Theisz,
Benedikt Westenfelder, Thomas Wunderer

Institute of Optoelectronics Ulm University

Albert-Einstein-Allee 45, 89081 Ulm, Germany
 URL: <http://www.uni-ulm.de/opto>
 Fax: +49-731/50-2 60 49
 Phone: +49-731/50-

Head of Department

Prof. Dr. Peter Unger -2 60 54 peter.unger@uni-ulm.de

Deputy Head

Prof. Dr. Ferdinand Scholz -2 60 52 ferdinand.scholz@uni-ulm.de

President of Ulm University

Prof. Dr. Karl Joachim Ebeling -2 20 00 karljoachim.ebeling@uni-ulm.de

Group Leader

Dr.-Ing. habil. Rainer Michalzik -2 60 48 rainer.michalzik@uni-ulm.de

Cleanroom Management

Dr.-Ing. Jürgen Mähnsß -2 60 53 juergen.maehnss@uni-ulm.de

Secretaries

Christine Bunk -2 60 50 christine.bunk@uni-ulm.de

Sükran Kilic -2 60 59 suekran.kilic@uni-ulm.de

Hildegard Mack -2 60 59 hildegard.mack@uni-ulm.de

Research Staff

M.Sc. Ahmed Al-Samaneh -2 60 37 ahmed.al-samaneh@uni-ulm.de

Dipl.-Ing. Anna Bergmann -2 60 38 anna.bergmann@uni-ulm.de

Dr.-Ing. Frank Demaria -2 60 46 frank.demaria@uni-ulm.de

M.Sc. Mohamed Fikry -2 61 95 mohamed.fikry@uni-ulm.de

M.Sc. Kamran Forghani -2 60 39 kamran.forghani@uni-ulm.de

M.Sc. Abdel-Sattar Gadallah -2 60 43 abdel-sattar.gadallah@uni-ulm.de

Dipl.-Ing. Joachim Hertkorn* -2 61 95 joachim.hertkorn@uni-ulm.de

Dipl.-Ing. Ihab Kardosh -2 60 35 ihab.kardosh@uni-ulm.de

Dipl.-Ing. Alexander Kern -2 60 37 alexander.kern@uni-ulm.de

Dipl.-Ing. Andrea Kroner* -2 60 35 andrea.kroner@uni-ulm.de

Dipl.-Phys. Frank Lipski -2 60 39 frank.lipski@uni-ulm.de

Dr.-Ing. Fernando Rinaldi -2 60 46 fernando.rinaldi@uni-ulm.de

Dipl.-Ing. Hendrik Roscher* -2 60 44 hendrik.roscher@uni-ulm.de

Dipl.-Phys. Stephan Schwaiger -2 60 56 stephan.schwaiger@uni-ulm.de

Dipl.-Ing. Wolfgang Schwarz -2 60 38 wolfgang.schwarz@uni-ulm.de

Dr.-Ing. Georgi Stareev* -2 64 53 georgi.stareev@uni-ulm.de

Dipl.-Ing. Sarad Bahadur Thapa* -2 61 95 sarad.thapa@uni-ulm.de

Dipl.-Phys. Dietmar Wahl -2 60 36 dietmar.wahl@uni-ulm.de

Dipl.-Phys. Benedikt Westenfelder -2 64 54 benedikt.westenfelder@uni-ulm.de

Dipl.-Ing. Thomas Wunderer -2 64 54 thomas.wunderer@uni-ulm.de

Technical Staff

Ilona Argut	-2 60 56	<code>ilona.argut@uni-ulm.de</code>
Rainer Blood	-2 60 44	<code>rainer.blood@uni-ulm.de</code>
Gerlinde Meixner	-2 60 41	<code>gerlinde.meixner@uni-ulm.de</code>
Susanne Menzel	-2 60 41	<code>susanne.menzel@uni-ulm.de</code>
Rudolf Rösch	-2 60 57	<code>rudolf.roesch@uni-ulm.de</code>
Josef Theisz	-2 60 30	<code>josef.theisz@uni-ulm.de</code>

* Member has left the institute meanwhile

