

## Publications of George Dimitrakopoulos

### Chapters in collective volumes

#### **Interfacial and junction line defect analysis for plasticity investigations**

in J. Lépinoux, D. Mazière, V. Pontikis, and G. Saada (eds.) "Multiscale Phenomena in Plasticity : from experiments to phenomenology, modeling and materials engineering" NATO Science Series (Kluwer Academic Publishers) **367**, 205-214 (2000)

Th. Karakostas, G. P. Dimitrakopoulos, J.G. Antonopoulos, and R. C. Pond

#### **Topological analysis of defects in nitride semiconductors**

**Chapter 7** in P. Ruterana, M. Albrecht, and J. Neugebauer (eds.) 'Nitride Semiconductors: Handbook on Materials and Devices', 321-377 (2003 Wiley-VCH Verlag GmbH & Co. KgaA Weinheim)

G. P. Dimitrakopoulos, Ph. Komninou, Th. Karakostas, and R. C. Pond

#### **Interfaces and defect interactions in nitride compound semiconductors for optoelectronic applications**

**Chapter 27** in *Recent Research Developments in Physics* vol.4 (2003), pp. 593-629 (Transworld Research Network, India, 2004, ISBN: 81-7895-078-2)

Ph. Komninou, G. P. Dimitrakopoulos, Th. Kehagias, J. Kioseoglou, and Th. Karakostas

#### **Nonlinear finite element and atomistic modelling of dislocations in heterostructures**

**Chapter 13** in Computer Methods in Mechanics - Lectures on Computational and Mathematical Methods 2009, Advanced Structured Materials **1**, 239-253 (2010)

P. Dluzewski, T. D. Young, G. P. Dimitrakopoulos, J. Kioseoglou and Ph. Komninou

### Papers in peer-reviewed international journals

#### **2016**

##### **Study of fully epitaxial Fe/Pt bilayers for spin pumping by ferromagnetic resonance spectroscopy**

*Physical Review B* **93**, 134405 (2016)

A. Conca, S. Keller, L. Mihalceanu, T. Kehagias, G. P. Dimitrakopoulos, B. Hillebrands, and E. Th. Papaioannou

##### **Stacking fault domains as sources of a-type threading dislocations in III-nitride heterostructures**

*Applied Physics Letters* **108**, 051901/1-5 (2016); DOI: 10.1063/1.4940745

J. Smalc-Koziorowska, C. Bazioti, M. Albrecht, and G. P. Dimitrakopoulos

##### **Structure, strain, and composition profiling of InAs/GaAs(211)B quantum dot superlattices**

*Journal of Applied Physics* **119**, 034304 (2016)

N. Florini, G. P. Dimitrakopoulos, J. Kioseoglou, S. Germanis, C. Katsidis, Z. Hatzopoulos, N. T. Pelekanos, and Th. Kehagias

##### **Molecular beam epitaxy of thick InGaN (0001) films: Effects of substrate temperature on structural and electronic properties**

*Journal of Crystal Growth* **437**, 20–25 (2016)

E. Papadomanolaki, C. Bazioti, S. A. Kazazis, M. Androulidaki, G.P. Dimitrakopoulos, E. Iliopoulos

#### **2015**

##### **Defects, strain relaxation, and compositional grading in high indium content InGaN epilayers grown by molecular beam epitaxy**

*Journal of Applied Physics* **118**, 155301/1-11 (2015)

C. Bazioti, E. Papadomanolaki, Th. Kehagias, T. Walther, J. Smalc-Koziorowska, E. Pavlidou, Ph. Komninou, Th. Karakostas, E. Iliopoulos, and G. P. Dimitrakopoulos

**Direct spontaneous growth and interfacial structural properties of inclined GaN nanopillars on r-plane sapphire**

*Journal of Applied Physics* **117**, 244302 (2015)

A. Adikimenakis, A. Lotsari, G. P. Dimitrakopoulos, Th. Kehagias, K. E. Aretouli, K. Tsagaraki, M. Androulidaki, Ph. Komninou, and A. Georgakilas

**Sub-surface laser nanostructuring in stratified metal/dielectric media: a versatile platform towards flexible, durable and large-scale plasmonic writing**

*Nanotechnology* **26**, 155301/1-10 (2015)

A. Siozios, N. Kalfagiannis, D. V. Bellas, C. Bazioti, G. P. Dimitrakopoulos, G. Vourlias, W. M. Cranton, E. Lidorikis, D. C. Koutsogeorgis, P. Patsalas

**High quality large area MoSe<sub>2</sub> and MoSe<sub>2</sub>/Bi<sub>2</sub>Se<sub>3</sub> heterostructures on AlN(0001)/Si(111) substrates by molecular beam epitaxy**

*Nanoscale* **7**, 7896-7905, (2015)

E. Xenogiannopoulou, P. Tsipas, K. E. Aretouli, D. Tsoutsou, S. A. Giannini, C. Bazioti, G. P. Dimitrakopoulos, Ph. Komninou, S. Brems, C. Hughebaert, I. P. Radu, A. Dimoulas

**Angular-dependent Raman study of a- and s-plane InN**

*Journal of Applied Physics* **117**, 075302/1-11 (2015)

K. Filintoglou, M. Katsikini, J. Arvanitidis, D. Christofilos, A. Lotsari, G. P. Dimitrakopoulos, N. Vouroutzis, A. O. Ajagunna, A. Georgakilas, N. Zoumakis, G. A. Kourouklis, S. Ves

**Structure and strain variation in InGaN interlayers grown by PAMBE at low substrate temperatures:**

**Structure and strain variation in InGaN interlayers grown by PAMBE**

*Physica Status Solidi (b)* **252**, 1155–1162 (2015)

C. Bazioti, E. Papadomanolaki, Th. Kehagias, M. Androulidaki, G. P. Dimitrakopoulos, E. Iliopoulos

**2014**

**Incineration of tannery sludge under oxic and anoxic conditions: Study of chromium speciation**

*Journal of Hazardous Materials* **283**, 672-679 (2014)

P. Kavouras, E. Pantazopoulou, S. Varitis, G. Vourlias, K. Chrissafis, G. P. Dimitrakopoulos, M. Mitrakas, A. I. Zouboulis, Th. Karakostas, and A. Xenidis

**Raman and photoluminescence mapping of In<sub>x</sub>Ga<sub>1-x</sub>N (x ~ 0.4) at high pressure: Optical determination of composition and stress**

*Applied Physics Letters* **105**, 092107/ (2014)

V. Gkrania, K. Filintoglou, J. Arvanitidis, D. Christofilos, C. Bazioti, G. P. Dimitrakopoulos, M. Katsikini, S. Ves, G. A. Kourouklis, N. Zoumakis, A. Georgakilas, E. Iliopoulos

**Dislocations and grain boundaries interactions in deformed titanium foils**

*Journal of the Mechanical Behaviour of Materials* **7**, 27-38 (1996)

Th. Kehagias, Ph. Komninou, P. Grigoriadis, G. P. Dimitrakopoulos, J. G. Antonopoulos, and Th. Karakostas

**Observation of Surface Dirac Cone in High-Quality Ultrathin Epitaxial Bi<sub>2</sub>Se<sub>3</sub> Topological Insulator on AlN(0001) Dielectric**

*ACS Nano* **8**, 6614–6619 (2014)

P. Tsipas, E. Xenogiannopoulou, S. Kassavetis, D. Tsoutsou, E. Golias, C. Bazioti, G. P. Dimitrakopoulos, Ph. Komninou, H. Liang, M. Caymax, and A. Dimoulas

**Structural anisotropic properties of  $\alpha$ -plane GaN epilayers grown on r-plane sapphire**

*Journal of Applied Physics* **115**, 213506/1-12 (2014)

A. Lotsari, Th. Kehagias, G. Tsiakatouras, K. Tsagaraki, M. Katsikini, J. Arvanitidis, D. Christofilos, S. Ves, Ph. Komninou, A. Georgakilas, and G. P. Dimitrakopoulos

**Transport properties of metal-semiconductor junctions on n-type InP prepared by electrophoretic deposition of Pt nanoparticles**

*Semiconductor Science and Technology* **29**, 045017/1-8 (2014)

R. Yatskiv, J. Grym, V. V. Brus, O. Cernohorsky, P.D. Maryanchuk, C. Bazioti, G. P. Dimitrakopoulos, Ph. Komninou

**Influence of laser annealing on the structural properties of sputtered AlN:Ag plasmonic nanocomposites**

*Journal of Materials Science* **49**, 3996-4006 (2014)

C. Bazioti, G. P. Dimitrakopoulos, Th. Kehagias, Ph. Komninou, A. Siozios, E. Lidorikis, D. C. Koutsogeorgis, and P. Patsalas

**Misfit dislocation reduction in InGaAs epilayers grown on porous GaAs substrates**

*Applied Surface Science* **306**, 89–93 (2014)

G.P. Dimitrakopoulos, C. Bazioti, J. Grym, P. Gladkov, E. Hulicius, J. Pangrác, O. Pacherová, and Ph. Komninou

**2013**

**Growth mechanism and microstructure of low defect density InN (0001) In-face thin films on Si (111) substrates**

*Journal of Applied Physics* **114**, 163519/ (2013)

Th. Kehagias, G. P. Dimitrakopoulos, A. O. Ajagunna, T. Koukoula, K. Tsagaraki, A. Adikimenakis, Ph. Komninou, and A. Georgakilas

**Nanostructure and strain in InGaN/GaN superlattices grown in GaN nanowires**

*Nanotechnology* **24**, 435702/1-14 (2013)

Th. Kehagias, G.P. Dimitrakopoulos, P. Becker, J. Kioseoglou, F. Furtmayr, T. Koukoula, A. Chernikov, S. Chatterjee, I. Häusler, Th. Karakostas, H.-M. Solowan, U. Schwarz, M. Eickhoff, and Ph. Komninou

**InGaN/GaN quantum dots as optical probes for the electric field at the GaN/electrolyte interface**

*Journal of Applied Physics* **114**, 074313/1-7 (2013)-

J. Teubert, S. Koslowski, S. Lippert, M. Schäfer, J. Wallys, G. Dimitrakopoulos, P. Komninou, A. Das, E. Monroy, and M. Eickhoff

**Influence of defect characteristics on the nanoindentation response of  $\alpha$ -plane GaN thin films**

*Physica Status Solidi (a)* **210**, 213-217 (2013)

P. Kavouras, A. Lotsari, Th. Kehagias, A. Georgakilas, Ph. Komninou, and G. P. Dimitrakopoulos

**2012**

**Structure and interfacial properties of semipolar s-plane (1-101) InN grown on r-plane sapphire**

*Physica Status Solidi (a)* **210**, 199-203 (2012)

G. P. Dimitrakopoulos, A. Lotsari, Th. Kehagias, A. Ajagunna, A. Georgakilas, Th. Karakostas, and Ph. Komninou

**The defect character of interface junction lines**

*Interface Science* **4**, 129-138 (1996)

G. P. Dimitrakopoulos, Th. Karakostas, and R. C. Pond

**Epitaxial relationship of semipolar s-plane (1-101) InN grown on r-plane sapphire**

*Applied Physics Letters* **101**, 011904/1-4 (2012)

G. P. Dimitrakopoulos

**Anisotropic strain in  $\alpha$ -plane GaN and polarization dependence of the Raman peaks**

*Physica Status Solidi (a)* **209**, 1085-1089 (2012)

M. Katsikini, J. Arvanitidis, D. Christofilos, S. Ves, G. P. Dimitrakopoulos, G. Tsiakatouras, K. Tsagaraki, and A. Georgakilas

**Structure and strain state of polar and semipolar InGaN quantum dots**

*Applied Surface Science* **260**, 7-12 (2012)

T. Koukoula, A. Lotsari, Th. Kehagias, G. P. Dimitrakopoulos, I. Häusler, A. Das, E. Monroy, Th. Karakostas, and Ph. Komninou

**Structural characterization of InN epilayers grown on *r*-plane sapphire by plasma-assisted MBE**

*Physica Status Solidi (c)* **9**, 534-537 (2012)

A. Lotsari, G. P. Dimitrakopoulos, Th. Kehagias, A. O. Ajagunna, E. Iliopoulos, A. Georgakilas, and Ph. Komninou

**Interfaces between nonpolar and semipolar III-nitride semiconductor orientations: Structure and defects**

*Journal of Applied Physics* **111**, 033507/1-10 (2012)

J. Kioseoglou, A. Lotsari, E. Kalesaki, and G. P. Dimitrakopoulos

**Atomistic modeling and HRTEM analysis of misfit dislocations in InN/GaN heterostructures**

*Applied Surface Science* **260**, 23-28 (2012)

J. Kioseoglou, E. Kalesaki, G. P. Dimitrakopoulos, Th. Kehagias, Ph. Komninou, and Th. Karakostas

**Optical Encoding by Plasmon-Based Patterning: Hard and Inorganic Materials Become Photosensitive**

*Nano Letters* **12**, 259-263 (2012)

A. Siozios, D. C. Koutsogeorgis, E. Lidorikis, G. P. Dimitrakopoulos, Th. Kehagias, H. Zoubos, Ph. Komninou, W. M. Cranton, C. Kosmidis, and P. Patsalas

**Morphology and origin of V-defects in semipolar (11-22) InGaN**

*Journal of Crystal Growth* **339**, 1-7 (2012)

A. Lotsari, A. Das, Th. Kehagias, Y. Kotsar, E. Monroy, Th. Karakostas, P. Gladkov, Ph. Komninou, and G. P. Dimitrakopoulos

**Structural properties of semipolar InGaN/GaN quantum dot superlattices grown by plasma-assisted MBE**

*Microelectronic Engineering* **90**, 108-111 (2012)

A. Lotsari, G.P. Dimitrakopoulos, Th. Kehagias, A. Das, E. Monroy, Ph. Komninou

**2011**

**Improved luminescence and thermal stability of semipolar (11-22) InGaN quantum dots**

*Applied Physics Letters* **98**, 201911/1-3 (2011)

A. Das, G. P. Dimitrakopoulos, Y. Kotsar, A. Lotsari, Th. Kehagias, Ph. Komninou, and E. Monroy

**Interfacial sources of extended defects in nonpolar and semipolar III-Nitride semiconductors**

*Journal of Physics: Conference Series* **281**, 012012/1-6 (2011)

G. P. Dimitrakopoulos

**Properties of GaN nanowires grown by molecular beam epitaxy (invited paper)**

*IEEE Journal of Selected Topics in Quantum Electronics* **17**, 878-888 (2011)

L. Geelhaar, C. Chèze, B. Jenichen, O. Brandt, C. Pfüller, S. Münch, R. Rothemund, S. Reitzenstein, A. Forchel, Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, Th. Karakostas, L. Lari, P. R. Chalker, M. H. Gass, and H. Riechert

**Growth and characterization of polar (0 0 0 1) and semipolar (11-22) InGaN/GaN quantum dots**

*Journal of Crystal Growth* **323**, 161-163 (2011)

A. Das, P. Sinha, Y. Kotsar, P.K. Kandaswamy, G. P. Dimitrakopoulos, Th. Kehagias, Ph. Komninou, G. Nataf, P. De Mierry and E. Monroy

**Structural characterization of ZnO nanopillars epitaxially grown on vicinal 4H-SiC substrate**

*Journal of Applied Physics* **109**, 043507/1-8 (2011)

I. Tsiaoussis, V. Khranovskyy, G. P. Dimitrakopoulos, B. Pecz, R. Yakimova, and J. Stoemenos

**2010**

**Bare-eye view at the nanoscale: a new visual interferometric multi-indicator (VIMI)**

*ACS Applied Materials & Interfaces* **2**, 3052–3058 (2010)

E. Lidorikis, P. Patsalas, N. Panagiotopoulos, C. Prouskas, G. Dimitrakopoulos, Ph. Komninou, Th. Karakostas, A. Tighe

**Morphology and strain of self-assembled semipolar GaN quantum dots in (11-22) AlN**

*Journal of Applied Physics* **108**, 104304/1-9 (2010)

G. P. Dimitrakopoulos, E. Kalesaki, J. Kioseoglou, Th. Kehagias, A. Lotsari, L. Lahourcade, E. Monroy, I. Häusler, H. Kirmse, W. Neumann, G. Jurczak, T. D. Young, P. Dlužewski, Ph. Komninou, and Th. Karakostas

**The defect character of GaN growth on r-plane sapphire**

*Journal of Applied Physics* **107**, 073525/1-10 (2010)

J. Smalc-Koziorowska, G. Tsiakatouras, A. Lotsari, A. Georgakilas, and G. P. Dimitrakopoulos

**Direct comparison of catalyst-free and catalyst-induced GaN nanowires**

*Nano Research* **3**, 528-536 (2010)

C. Chèze, L. Geelhaar, O. Brandt, W. M. Weber, H. Riechert, S. Münch, R. Rothemund, S. Reitzenstein, A. Forchel, Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, and Th. Karakostas

**Continuum and atomistic modelling of the mixed straight dislocation**

*International Journal for Multiscale Computational Engineering* **8**, 331–342 (2010)

P. Dlužewski, T. D. Young, G. P. Dimitrakopoulos, Ph. Komninou

**Interfacial structure of semipolar AlN grown on m-plane sapphire by MBE**

*Physica Status Solidi (b)*, **247**, 1637–1640 (2010)

Th. Kehagias, L. Lahourcade, A. Lotsari, E. Monroy, G. P. Dimitrakopoulos, and Ph. Komninou

**Electron microscopy of InGaN nanopillars spontaneously grown on Si (111) substrates**

*Physica Status Solidi (c)*, **7**, 1305–1308 (2010)

Th. Kehagias, I. Kerasiotis, A. P. Vajpeyi, I. Häusler, W. Neumann, A. Georgakilas, G. P. Dimitrakopoulos, and Ph. Komnninou

**Microstructure of N-face InN grown on Si (111) by plasma-assisted MBE using a thin GaN-AlN buffer layer**

*Physica Status Solidi (a)* **207**, 1074-1078 (2010)

G. P. Dimitrakopoulos, Th. Kehagias, A. Ajagunna, J. Kioseoglou, I. Kerasiotis, G. Nouet, A. P. Vajpeyi, Ph. Komninou and Th. Karakostas

**Metal-containing Diamond Like Carbon (DLC:Ag) and AlN (AlN:Ag) metallo-dielectric nanocomposites**

*Thin Solid Films* **518**, 1508-1511 (2010)

G. M. Matenoglou, H. Zoubos, A. Lotsari, Ch. E. Lekka, Ph. Komninou, G. P. Dimitrakopoulos, C. Kosmidis, G. A. Evangelakis, P. Patsalas

**Structure, stability and mechanical performance of AlN:Ag nanocomposite films**

*Surface & Coatings Technology* **204**, 1937-1941 (2010)

A. Lotsari, G. P. Dimitrakopoulos, Th. Kehagias, P. Kavouras, H. Zoubos, L. E. Koutsokeras, P. Patsalas, Ph. Komninou

**2009****Polar AlN/GaN interfaces: Structures and energetics**

*Physica Status Solidi (a)* **206**, 1892–1897 (2009)

J. Kioseoglou, E. Kalesaki, L. Lymperakis, G. P. Dimitrakopoulos, Ph. Komninou, and Th. Karakostas

**Mechanism of compositional modulations in epitaxial InAlN films grown by molecular beam epitaxy**

*Applied Physics Letters*, **95**, 021913/1-3 (2009)

S.-L. Sahonta, G. P. Dimitrakopoulos, Th. Kehagias, J. Kioseoglou, A. Adikimenakis, E. Iliopoulos, A. Georgakilas, H. Kirmse, W. Neumann, and Ph. Komninou

**Indium migration paths in V-defects of InAlN grown by metal-organic vapor phase epitaxy**

*Applied Physics Letters* **95**, 071905/1-3 (2009)

And Erratum: *Applied Physics Letters* **99**, 0599902 (2011)

Th. Kehagias, G. P. Dimitrakopoulos, J. Kioseoglou, H. Kirmse, C. Giesen, M. Heuken, A. Georgakilas, W. Neumann, Th. Karakostas, and Ph. Komninou

**Strain accommodation and interfacial structure of AlN interlayers in GaN (Invited paper)**

*Crystal Research and Technology.* **44**, 1170 – 1180 (2009)

G. P. Dimitrakopoulos, E. Kalesaki, Ph. Komninou, Th. Kehagias, J. Kioseoglou and Th. Karakostas

**Stranski-Krastanow growth of (112̄2)-oriented GaN/AlN quantum dots**

*Applied Physics Letters* **94**, 111901/1-3 (2009)

L. Lahourcade, S. Valdueza-Felip, T. Kehagias, G. P. Dimitrakopoulos, P. Komninou, and E. Monroy

**2008**

**Microstructure of defects in InGaN/GaN quantum well heterostructures**

*Journal of Physics: Conference Series* **126**, 012048/1-4 (2008)

S.-L. Sahonta, Ph. Komninou, G. P. Dimitrakopoulos, Th. Kehagias, J. Kioseoglou, Th. Karakostas, C. Salcianu and E.J. Thrush.

**Crystallization of Amorphous Silicon Thin Films: Comparison Between Experimental and Computer Simulation Results.**

*Journal of Materials Science* **43**, 3976–3981 (2008)

J. Kioseoglou, Ph. Komninou, G. P. Dimitrakopoulos, I. P. Antoniades, M.K. Hatalis and Th. Karakostas

**Study of InN/GaN interfaces using molecular dynamics**

*Journal of Materials Science* **43**, 3982–3988 (2008)

J. Kioseoglou, E. Kalessaki, G. P. Dimitrakopoulos, Ph. Komninou, and Th. Karakostas

**Nonsingular dislocation and crack fields: implications to small volumes**

*Microsystem Technologies – Micro and Nanosystems Information Storage and processing systems* **15**, 117-121 (2008)

J. Kioseoglou, I. Konstantopoulos, G. Ribarik, G. P. Dimitrakopoulos and E. C. Aifantis

**Effect of AlN interlayers in the structure of GaN-on-Si grown by plasma-assisted MBE**

*Journal of Crystal Growth* **311**, 2010-2015 (2008)

A. Adikimenakis, S.-L. Sahonta, G. P. Dimitrakopoulos, J. Domagala, Th. Kehagias, Ph. Komninou, E. Iliopoulos, and A. Georgakilas

**Dislocation core investigation by geometric phase analysis and the dislocation density tensor**

*Journal of Physics D: Applied Physics* **41**, 035408/1-8 (2008)

J. Kioseoglou, G. P. Dimitrakopoulos, Ph. Komninou, Th. Karakostas, and E. C. Aifantis

**Step-induced misorientation of GaN grown on r-plane sapphire**

*Applied Physics Letters* **93**, 021910 (2008)

J. Smalc-Koziorowska, G. P. Dimitrakopoulos, S.-L. Sahonta, G. Tsakatouras, A. Georgakilas, and Ph. Komninou

**Defect characterization and analysis of III-V nanowires grown by Ni-promoted MBE**

*Physica Status Solidi (a)* **205**, 2589-2592 (2008)

L. Lari, R.T. Murray, M.H. Gass, T. J. Bullough, P.R. Chalker, J. Kioseoglou, G. P. Dimitrakopoulos, Th. Kehagias, Ph. Komninou, Th. Karakostas, C. Chèze, L. Geelhaar, H. Riechert.

**Atomic-scale configuration of catalyst particles on GaN nanowires**

*Physica Status Solidi (c)* **5**, 3716-3719 (2008)

Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, C. Chèze, L. Geelhaar, H. Riechert, and Th. Karakostas

**Strain relaxation in AlN/GaN heterostructures grown by molecular beam epitaxy**

*Physica Status Solidi (a)* **205**, 2569-2572 (2008)

G. P. Dimitrakopoulos, Ph. Komninou, Th. Kehagias, S.-L. Sahonta, J. Kioseoglou, N. Vouroutzis, I. Hausler, W. Neumann, E. Iliopoulos, A. Georgakilas, and Th. Karakostas

**Structural properties of ultrathin InGaN/GaN quantum wells**

*Physica Status Solidi (a)* **205**, 2556-2559 (2008)

S.-L. Sahonta, Ph. Komninou, G. P. Dimitrakopoulos, C. Salcianu, E. J. Thrush, Th. Karakostas

**Effects of stress-relieving AlN interlayers in GaN-on-Si grown by plasma-assisted molecular beam epitaxy**  
*Mater. Res. Soc. Symp. Proc. Vol. 1068* (2008) Materials Research Society 1068-C06-04  
A. Adikimenakis, L. Sahonta, G. P. Dimitrakopoulos, J. Domagala, Ph. Komninou, and A. Georgakilas

## 2007

### Axial and radial growth of Ni-induced GaN nanowires

*Applied Physics Letters* **91**, 093113 (2007)

L. Geelhaar, C. Chèze, W. M. Weber, R. Averbeck, H. Riechert, Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, Th. Karakostas

### 3D modelling of misfit networks in the interface region of heterostructures

*Journal of Physics D – Applied Physics* **40**, 4084-4091 (2007)

T. D. Young, J. Kioseoglou, G. P. Dimitrakopoulos, P. Dłużewski and Ph. Komninou

### Strain distribution of thin InN epilayers grown on (0001) GaN templates by molecular beam epitaxy

*Applied Physics Letters* **90**, 061920/1-3 (2007)

A. Delimitis, P. Komninou, G. P. Dimitrakopoulos, Th. Kehagias, J. Kioseoglou, Th. Karakostas, and G. Nouet

## 2006

### Energetics of the 30° Shockley partial dislocation in wurtzite GaN

*Superlattices and Microstructures* **40**, 458-463 (2006)

I. Belabbas, G. Dimitrakopoulos, J. Kioseoglou, A. Bere, J. Chen, P. Komninou, P. Ruterana, and G. Nouet

### Mixed partial dislocation core structure in GaN by high resolution electron microscopy

*Physica Status Solidi (a)* **203**, 2156-2160 (2006)

J. Kioseoglou, G. P. Dimitrakopoulos, Ph. Komninou, Th. Kehagias, and Th. Karakostas

### Analysis of partial dislocations in wurtzite GaN using gradient elasticity

*Physica Status Solidi (a)* **203**, 2161-2166 (2006)

J. Kioseoglou, G. P. Dimitrakopoulos, Ph. Komninou, Th. Karakostas, I. Konstantopoulos, M. Avlonitis, and E.C. Aifantis

### Structural properties of quaternary InAlGaN MQW grown by plasma-assisted MBE

*Physica Status Solidi (a)* **203**, 2151–2155 (2006)

G. P. Dimitrakopoulos, Ph. Komninou, J. Kioseoglou, A. Georgakilas, G. Nouet and Th. Karakostas

## 2005-2000

### Partial dislocations in wurtzite GaN (*invited paper*)

*Physica Status Solidi (a)*, **202**, 2888-2899 (2005)

Ph. Komninou, J. Kioseoglou, G. P. Dimitrakopoulos, Th. Kehagias, and Th. Karakostas

### Interfacial steps, dislocations, and inversion domain boundaries in the GaN/AlN/Si (0001)/(111) epitaxial system

*Physica Status Solidi (b)* **242**, 1617-1627 (2005)

G. P. Dimitrakopoulos, A. M. Sanchez, Ph. Komninou, Th. Kehagias, Th. Karakostas, G. Nouet, and P. Ruterana

### Atomic simulations and HRTEM observations of a 18 tilt grain boundary in GaN

*Physica Status Solidi (a)* **202**, 799-803 (2005)

J. Kioseoglou, A. Bérén, Ph. Komninou, G. P. Dimitrakopoulos, G. Nouet, E. Iliopoulos, A. Serra, Th. Karakostas

### Disconnects and inversion domain formation in GaN/AlN heteroepitaxy on (111) Silicon

*Physica Status Solidi (c)* **2**, 2500-2503 (2005)

G. P. Dimitrakopoulos, A. M. Sanchez, Ph. Komninou, P. Ruterana, G. Nouet, Th. Kehagias, and Th. Karakostas

**Mechanism for pinhole formation in GaN / AlN / Si(111) MBE layers from steps at the substrate surface.**

*Applied Physics Letters* **86**, 011917, (2005)

A. M. Sanchez, G. P. Dimitrakopoulos and P. Ruterana

**Microstructural assessment of InN-on-GaN films grown by plasma-assisted MBE**

*Superlattices and Microstructures* **36**, 509-515 (2004)

Ph. Komninou, Th. Kehagias, A. Delimitis, G. P. Dimitrakopoulos, J. Kioseoglou, E. Dimakis, A. Georgakilas and Th. Karakostas

**Junction lines of inversion domain boundaries with stacking faults in GaN**

*Physical Review B*, **70** 115331/1-7 (2004)

J. Kioseoglou , G. P. Dimitrakopoulos, Ph. Komninou, H. M. Polatoglou, A. Serra , A. Bérén, G. Nouet , and Th. Karakostas

**Atomic structures and energies of partial dislocations in wurtzite GaN**

*Physical Review B*, **70**, 035309/1-12 (2004)

J. Kioseoglou, G. P. Dimitrakopoulos, Ph. Komninou, and Th. Karakostas

**Atomic structure and energy of junctions between inversion domain boundaries and stacking faults in wurtzite GaN**

*Physica Status Solidi (c)* **0**, 2464-2469 (2003)

J. Kioseoglou, A. Bérén, G. P. Dimitrakopoulos, A. Serra, G. Nouet and Ph. Komninou

**Mechanisms for the formation of inversion domains in GaN**

*Institute of Physics Conference Series* **180**, 269-272 (2003)

A. M. Sánchez, G. P. Dimitrakopoulos, and P. Ruterana

**Microstructure of planar defects and their interactions in wurtzite GaN films**

*Solid State Electronics* **47**, 553-557 (2003)

J. Kioseoglou, Ph. Komninou, G. P. Dimitrakopoulos, Th. Kehagias, H. M. Polatoglou, G. Nouet and Th. Karakostas

**Disconnections at translation domain boundaries in epitaxial GaN**

*Journal of Physics: Condensed Matter* **14**, 12709-12715 (2002)

G. P. Dimitrakopoulos, Th. Kehagias, Ph. Komninou, G. Nouet, and Th. Karakostas

**Interfacial and defect structures in multilayered GaN/AlN films**

*Journal of Physics: Condensed Matter* **14**, 13277-13283 (2002)

Ph. Komninou, Th. Kehagias, J. Kioseoglou, G. P. Dimitrakopoulos, A. Sampath, T. D. Moustakas, G. Nouet, and Th. Karakostas

**Atomic scale models of interactions between inversion domain boundaries and intrinsic basal stacking faults in GaN**

*Diamond & Related Materials*, **11**, 905-909 (2002)

J. Kioseoglou, G. P. Dimitrakopoulos, H. M. Polatoglou, L. Limperakis, G. Nouet, and Ph. Komninou

**Topological analysis of defects in epitaxial nitride films and interfaces (invited paper)**

*Physica Status Solidi (b)* **227**, 45-92 (2001)

G. P. Dimitrakopoulos, Ph. Komninou, and R. C. Pond

**Structural transition of inversion domain boundaries through interactions with intrinsic basal stacking faults in epitaxial GaN**

*Physical Review B* **64**, 245325/1-12 (2001)

G. P. Dimitrakopoulos, Ph. Komninou, J. Kioseoglou, Th. Kehagias, E. Sarigiannidou, A. Georgakilas, G. Nouet, and Th. Karakostas

**Interfacial dislocations in TiN/GaN thin films**

*Journal of Physics: Condensed Matter* **12**, 10295-10300 (2000)

Ph. Komninou, G. P. Dimitrakopoulos, G. Nouet, Th. Kehagias, P. Ruterana and Th. Karakostas

## **Before 2000**

### **Junction line disclinations : Characterisation and observations**

*Interface Science* **7**, 217-229 (1999)

G. P. Dimitrakopoulos, Ph. Komninou, Th. Karakostas, and R. C. Pond

### **Interfacial dislocations at the junction lines of {211} microfacets of a twin boundary in silicon**

*Philosophical Magazine A* **78**, 255-272 (1998)

Ph. Komninou and G. P. Dimitrakopoulos

### **The defect character of carbon nanotubes and nanoparticles**

*Acta Crystallographica A* **53**, 341-351 (1997)

G. P. Dimitrakopoulos, V. P. Dravid, Th. Karakostas, and R. C. Pond

### **Line defects separating distinct interfacial structures: Topological character and diffusive flux considerations**

*Interface Science* **5**, 35-46, (1997)

G. P. Dimitrakopoulos, Th. Karakostas, J. G. Antonopoulos, and R. C. Pond

### **Topology of twin interface junctions in epitaxial $\beta$ -SiC**

*Diamond and Related Materials* **6**, 1362-1364 (1997)

V. Papaioannou, Ph. Komninou, G. P. Dimitrakopoulos, K. Zekentes, B. Pecz, Th. Karakostas, and J. Stoemenos

### **Symmetry analysis of interface triple junctions**

*Acta Crystallographica A* **52**, 62-76 (1996)

G. P. Dimitrakopoulos and Th. Karakostas

### **Topology of crystallite junctions in epitaxial semiconductors**

*Journal of the Mechanical Behaviour of Materials* **7**, 51-65 (1996)

G. P. Dimitrakopoulos, Ph. Komninou, K. Zekentes, V. Papaioannou, J. Stoemenos, and Th. Karakostas

### **Interfacial dislocations in mechanically deformed hcp titanium**

*Journal of the Mechanical Behaviour of Materials* **6**, 41-50 (1995)

Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, J. G. Antonopoulos, and Th. Karakostas

### **Slip transfer across low-angle grain boundaries of deformed titanium**

*Scripta Metallurgica Materialia* **33**, 1883-1888 (1995)

Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, J. G. Antonopoulos, and Th. Karakostas

### **Pyramidal slip in electron beam heated deformed titanium**

*Interface Science* **3**, 195-201 (1995)

Th. Kehagias, Ph. Komninou, P. Grigoriadis, G. P. Dimitrakopoulos, J. G. Antonopoulos, and Th. Karakostas

### **Misfit dislocations and antiphase domain boundaries in GaAs/Si interface**

*Journal of Applied Physics* **75**, 143-152 (1994)

Ph. Komninou, J. Stoemenos, G. P. Dimitrakopoulos, and Th. Karakostas

### **Interfacial dislocation arrays in twin boundaries of deformed titanium**

*Scripta Metallurgica Materialia* **30**, 1311-1315 (1994)

Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, J. G. Antonopoulos, and Th. Karakostas

### **Grain boundary dislocation structures in deformed hexagonal close-packed metals**

*Materials Science Forum* **126-128**, 149-152 (1993)

Th. Kehagias, Ph. Komninou, G. P. Dimitrakopoulos, E. K. Polychroniadis, J. G. Antonopoulos, and Th. Karakostas