

Rastelli, Armando

Date of Birth: 09.10.74

Citizenship: Italian

Familial status: Married, 2 children

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Scientific career

- 04.2010** – “Habilitation” at the Technical University of **Chemnitz, Germany**, faculty of Natural Sciences.
- 01.2009** – Permanent staff member at IFW **Dresden, Germany**
- 08.2007** – “Abteilungsleiter” (head of section) of “Quantum Dots” at IIN-IFW
- Novel strain-tunable quantum dot devices (e.g. single dot LEDs, tunable sources of entangled photons) integrated onto piezoelectric substrates
 - Study of effects of external biaxial and uniaxial stress on emission of single quantum dots in semiconductor membranes and microcavities
 - Laser and thermal processing of semiconductor structures (quantum dots, optical microcavities, LEDs, QW-heterostructures)
 - Epitaxial growth of strained and unstrained semiconductor quantum dot structures (SiGe and III-V): structural characterization and fundamental growth phenomena
 - Thermoelectric properties of semiconductors with embedded nanocrystals
 - Advanced characterization of semiconductor quantum dots by atomic-force-microscopy-based nanotomography
- 04.2007** – Researcher and group leader at IIN-IFW, Dresden
- 12.2005 – 03.2007** **Head of the „Quantum Dots group“** in the MBE Group of O.G. Schmidt, Max-Planck-Institut für Festkörperforschung (MPI-FKF), **Stuttgart, Germany**
- Epitaxial growth of novel unstrained quantum dots and lateral quantum dot molecules
 - Investigation of fundamental growth phenomena by means of scanning probe microscopy and selective wet chemical etching
 - Single-dot spectroscopy
 - *In situ* laser processing of semiconductor structures (quantum dots, microcavities)
- 01.2003 – 11.2005** Post-Doc in the MBE group, MPI-FKF, Stuttgart
- 10.1999 – 12.2002** **PhD student in Physics at the University of Pavia, Italy**

- 2003 (Feb. 25th) PhD in Physics, Supervisor Prof. Dr. F. Marabelli, Title: *Morphological evolution of SiGe islands on Si(001)*.
- 08.2002 – 12.2002 Stay at the Politecnico di Milano, **Como, Italy** (Laboratory for Epitaxial Nanostructures on Silicon and Spintronics, Group of Prof. Dr. H. von Känel)
- 05.2002 – 07.2002 Undergraduate Marie-Curie Fellow at the Technical University of **Tampere, Finland** (Optoelectronic Research Center, Group of Prof. M. Pessa)
- 10.2000 – 04.2002 Stay at the Swiss Federal Institute of Technology (ETH) of **Zürich, Switzerland** (Laboratory for Solid State Research, Group of Priv. Doz. Dr. H. von Känel)
- Growth of VCSEL structures by III-V MBE
- 10.1999 – 09.2000 Stay at the University of Pavia, Italy (Department of Physics, Laboratory for optical spectroscopy of semiconductors, Group of Prof. G. Guizzetti and Prof. F. Marabelli)
- Attended courses on solid state and semiconductor Physics. Experimental work on FTIR
- 12.1998 – 09.1999 Civil service in Smerillo, Italy, popularization of natural sciences (physics and astronomy)**
- 1999 – 2009 Permanent position as teacher of Physics and Mathematics at the “Liceo scientifico di Montegiorgio” (“Gymnasium”), Italy**
- 10.1993 – 07.1998 Studying Physics at the University of Bologna (Italy)**
- 1998 (Jul. 16th) “Laurea” (“Diplom”) in Physics at the University of Bologna (final note 110/110 *cum laude*)
- Title: *Study of the inelastic interaction of high energy muons with the MACRO experiment at Gran Sasso*
- 09.1997 – 08.1998 Stipend at the National Laboratories of Gran Sasso, L’Aquila, Italy
- Development of simulation and analysis software for validation of models on hadron production through inelastic interaction of high energy muons
- 07.1993** Leaving certificate (“Abitur”) at the “Liceo scientifico di Fermo”, Italy.

Awards and Memberships

- 15.10.2009 IIN Forschungspreis 2009
- 2009- Member of the European Thermoelectrics Society
- 2008- Member of the German Physical Society (DPG)
- 2002 Marie-Curie Fellow at the Technical University of Tampere, Finland
- 1999-2000 Member of the Italian Physics Society

Experience, skills and major achievements

- Epitaxial growth of semiconductor nanostructures (SiGe and III-As) by molecular beam and magnetron sputtering epitaxy
- Development of unconventional quantum dot structures (such as unstrained GaAs/AlGaAs QDs, lateral QD molecules, quantum rings)
- Structural characterization of nanostructures via scanning probe microscopy (STM and AFM), also combined with selective-wet-chemical etching
- Optical spectroscopy of single nanostructures
- Development of AFM-based nanotomography for studying the 3D composition of self-assembled QDs
- Development of laser-based processing techniques for semiconductor nanostructures and optical microcavities
- Development of software algorithms (with graphic-user-interface for ease of use and distribution to colleagues) for efficient visualization and analysis of SPM and optical spectroscopy data.

Languages

Italian (mother tongue)

German (fluent, oral and written)

English (fluent, oral and written)

French (basic knowledge)

Patents

Thermoelektrisches Bauelement und Verfahren zu seiner Herstellung. EU Patent Nr. 09780666.5 – 1235 / 2304818. T. Dienel, J. Schumann, A. Rastelli, O.G. Schmidt

Invited talks and seminars

1. *Reversible control of optically active quantum dots by strain*
Seminar, School of Physics and Astronomy, Cardiff University
Cardiff, UK. 15.06.2011
2. *Strain-tunable quantum dot devices*
Seminar, Kavli Institute of Nanoscience, Technical University of Delft,
Delft, The Netherlands. 11.05.2011
3. *Investigating the shape and composition of semiconductor quantum dots by scanning probe microscopy and selective wet chemical etching*
18th Interdisciplinary Surface Science Conference (ISSC-18)
Warwick, UK, 4-7.04.2011
4. *Adding functionalities to quantum dot heterostructures and devices by stress*
Sonderkolloquium, TU Berlin
Berlin, Germany, 22.12.2010
5. *Looking at self-assembled quantum dots from different perspectives*
VCIAN 2010
Santorini, Greece, 21-25.06.2010

6. *Positioning and stressing self-assembled quantum dots*
Seminar, Photonics and Semiconductor Nanophysics, TU/Eindhoven
Eindhoven, The Netherlands, 10.06.2010
7. *Making and changing Quantum Dots by Stress*
Transalp'Nano 2010
Como, Italy, 3.-5.06.2010
8. *Cross-plane thermal conductivity measurements of thin Si layers with embedded Ge dots*
Thermal conductivity in reduced dimensions: 3 Omega method and beyond, SPP 1386
Workshop, University of Göttingen
Göttingen, Germany, 27.-28.05.2010
9. *Scattering Phonons and Trapping Excitons with Self-assembled Quantum Dots*
Physikalisches Colloquium, Technical University of Chemnitz
Chemnitz, Germany, 16.04.2010
10. *Stress as Fabrication and Post-Fabrication Tuning Tool for Quantum Dots*
IR-ON, InfraRed Optical Nanostructure Symposium
Wien, Austria, 08-09.04.2010
11. *Fabrication and Post-Fabrication Tuning of Quantum Dots by Stress*
Seminar, Università di Milano Bicocca
Milano, Italy, 02.03.2010
12. *Thermoelectrics of SiGe: From bulk to nanostructures*
SPP1386 Thermoelectrics Winter School
Bremen, Germany, 14.-19.02.2010
13. *Tuning quantum dot emission and cavity mode energies by stress and heat.*
Seminar, Lehrstuhl für Technische Physik, University of Würzburg
Würzburg, Germany, 17.12.2009
14. *Self-assembled quantum dots: growth phenomena and post-growth tuning.*
Seminar, School of Physics and Astronomy, University of Nottingham
Nottingham, UK, 17.11.2009
15. *SiGe/Si and InGaAs/GaAs islands: Shape transitions and 3D composition profiles.*
26th European conference on surface science (ECOSS)
Parma, Italy, 30.08-04.09.2009
16. *(Keynote) New tools for investigating and modifying the structure of self-assembled quantum dots.*
2nd Workshop on Epitaxial Growth and Fundamental Properties of Semiconductor
Nanostructures, SemiconNano 2009
Anan, Tokushima, Japan, 09.-14.08.2009
17. *Growth and thermal conductivity of self-assembled SiGe/Si(001) nanocrystal multilayers.*
CECAM Workshop on Thermoelectric Transport: progress in first principles and other
approaches and interplay with experiment
Lausanne, Switzerland, 22.-24.07.2009
18. *Fabrication and emission energy engineering of self-assembled quantum dot structures*
Seminar, Institute of Solid State Physics, Universität Bremen
Bremen, Germany, 30.06.2009
19. *Ultralow thermal conductivity of Si with embedded SiGe nanoclusters*
Workshop on Spin Caloritronics
Dresden, Germany, 12.-15.05.2009

20. *New approaches for engineering quantum dot light emission properties.*
Symposium on Optical Spectroscopy on Microstructured Semiconductors,
Univ. Hamburg,
Hamburg, Germany, 04.03.2009
21. *Alloying and Three-Dimensional Composition Profiles of Single Strained Islands*
2nd International Conference on Physics at surfaces and Interfaces
Puri, Orissa, India, 23.-27.02.2009
22. *Self-assembled quantum dots: composition profiles and emission energy tuning*
Seminar, Tyndall National Institute, Cork,
Cork, Ireland, 16.12.2008
23. *Optically active lateral quantum dot molecules.*
15th International Conference on Superlattices, Nanostructures and Nanodevices
(ICSNN08),
Natal, Brazil. 03-08.08.2008
24. *(Plenary) Towards position- and wavelength-controlled quantum dots for single dot based devices.*
UK Compound semiconductors Conference 2008,
Sheffield, UK. 02-03.07.2008
25. *(Invited lecture) Quantum dots and microcavities.*
EU-ProMiNaS Training course on “Electrical and optical characterization of nanodevices”,
Rome, Italy. 09-20.06.2008
26. *Growth and control of self-assembled Quantum Dot structures.*
Seminar, Key Lab of Semiconductor Materials, Institute of Semiconductors, Chinese Academy of Sciences,
Beijing, China. 13.06.2008
27. *Scalable Quantum Dot systems: current challenges.*
International Material Research Conference 2008,
Chongqing, China. 8-12.06.2008
28. *Understanding and controlling the properties of self-assembled quantum dots.*
Seminar, Physics Department of the University of Paderborn
Paderborn, Germany. 05.12.2007
29. *Tailoring the properties of self-assembled quantum dots.*
Seminar, Institute of Nanostructure Technologies and Analytics
Kassel, Germany. 04.12.2007
30. *Morphological and compositional evolution of SiGe/Si(001) islands investigated by scanning probe microscopy and selective chemical etching.*
Seminar in the Interdisziplinäres Zentrum für Material-wissenschaften der Universität Halle
Halle, Germany. 07.11.2007
31. *Growth and control of self-assembled Quantum Dots.*
Seminar in the Institute for Semiconductor and Solid-State Physics of the Johannes Kepler University of Linz
Linz, Austria. 29.10.2007
32. *Self-Assembled Quantum Dots: Epitaxial Growth and Current Challenges.*
Colloquium, School of Physics and Astronomy, Cardiff University
Cardiff, UK. 03.10.2007
33. *Solid state atoms and molecules.*
Seminar, Department of Physics, University of Pavia
Pavia, Italy. 10.07.2007

34. *Semiconductor-based artificial atoms and molecules.*
Seminar, Dept. of Physics/Semiconductor Physics, Technical University of Chemnitz
Chemnitz, Germany. 28.06.2007
35. *Quantum Dots with Perfectly Resonant Emission Energies.*
19th International Conference on Indium Phosphide and Related Materials (IPRM'07),
Matsue, Japan. 14-15.05.2007
36. *Self-assembled quantum dots.*
Seminar, Kavli Institute of Nanoscience, Technical University of Delft,
Delft, The Netherlands. 27.04.2007
37. *Deterministic control of confined electronic and photonic states in single
semiconductor nanostructures*
Material Research Society (MRS) Fall meeting,
Boston, MA, USA. 1.12.2006
38. *Strained SiGe/Si(001) islands leave footprints on the substrate.*
1st Workshop on Epitaxial Growth and Fundamental Properties of Semiconductor
Nanostructures,
Bonassola, Italy 21.09.2006
39. *Self-assembled quantum dots: new insights and deterministic energy tuning.*
Seminar, Laboratory of Physics of nanostructures, EPFL Lausanne,
Lausanne, Switzerland, 19.06.2006
40. *Self-assembled semiconductor quantum dots.*
Seminar, Laboratory for Epitaxial Nanostructures on Silicon and Spintronics,
Como, Italy, 09.05.2006
41. *Reading the footprints of strained islands.*
6th International Workshop on Epitaxial Semiconductors on Patterned Substrates and
Novel Index Surfaces ESPS-NIS
Nottingham, UK, 03-05.04.2006
42. *Self-assembled quantum dots: Structural and optical properties at the single dot level.*
Seminar, Dept. of Physics of the Università di Camerino,
Camerino, Italy, 15.11.2005
43. *A close Look into the Epitaxial Growth of Self-Assembled Quantum Dots.*
Seminar, Institut für Festkörperphysik, Technische Universität Berlin,
Berlin, Germany, 22.04.2004
44. *Morphological evolution of Ge and SiGe islands during growth and Si capping: a
high resolution STM study.*
12th EURO-MBE Workshop,
Bad Hofgastein, Austria, 16-19.02.2003

List of Publications

I. Book contributions, editions of books, and review articles:

1. F. Ding, B. Li, N. Akopian, U. Perinetti, Y. H. Chen, F. M. Peeters, A. Rastelli, V. Zwiller, O. G. Schmidt
Single neutral excitons confined in AsBr₃ in situ etched InGaAs quantum rings
J. Nanoelectron. Optoelectron. **6**, 57 (2011)
2. L. Wang, A. Rastelli, S. Kiravittaya, M. Benyoucef, and O.G. Schmidt, *Self-assembled quantum dot molecules*
Adv. Mat., **21**, 2601 (2009)
3. S. Kiravittaya, A. Rastelli and O. G. Schmidt, *Advanced quantum dot configurations*
Rep. Prog. Phys. **72**, 046502 (2009).
4. A. Rastelli, S. Kiravittaya, O.G. Schmidt, *Growth and Control of Optically Active Quantum Dots*, in “Single Semiconductor Quantum Dots”, edited by P. Michler,
Springer (Berlin), 2009
5. A. Rastelli, M. Stoffel, T. Merdzhanova and O.G. Schmidt, *Intermixing and composition profiles of strained SiGe islands on Si(001)*
Journal of Physics: Condensed Matter **20**, 454214 (2008).
6. A. Rastelli, R. Songmuang, S. Kiravittaya, O.G. Schmidt, *Hierarchical Self-Assembly of Lateral Quantum-Dot Molecules around nanoholes*, in “Lateral alignment of epitaxial quantum dots”, edited by O.G. Schmidt
Springer (Berlin), 2007
7. A. Rastelli, M. Stoffel, T. Merdzhanova, U. Denker, and O. G. Schmidt, *Strained SiGe islands on Si(001): Evolution, motion, dissolution, and dislocation introduction*
phys. stat. sol. (a) **203**, 3506 (2006).
8. A. Rastelli, M. Stoffel, M. Stoffel, G. Katsaros, J. Tersoff, U. Denker, T. Merdzhanova, G. S. Kar, G. Costantini, K. Kern, H. von Känel, O. G. Schmidt,
Reading the footprints of strained islands
Microelectronics Journal **37**, 1471 (2006).
9. S. Kiravittaya, R. Songmuang, A. Rastelli, H. Heidemeyer, and O. G. Schmidt, *Multi-scale ordering in self-assembled InAs/GaAs(001) quantum dots*
Nano. Res. Lett. **1**, 1 (2006).
10. F. Ratto, G. Costantini, A. Rastelli, O. G. Schmidt, K. Kern, and F. Rosei, *Alloying of self-organized semiconductor 3D islands*
J. Exp. Nanoscience **1**, 279 (2006).

II. Journals (conference contributions are not included here):

2011

11. F. Intonti, V. Matarazzo, A. Nasir, O. Makarovsky, R. Campion, A. Patané, S. Kumar, A. Rastelli, O. G. Schmidt, M. Gurioli
Nano-sized light emitting diodes by near field laser exposure
Appl. Phys. Lett. **98**, 183102 (2011)
12. N. Akopian, L. Wang, A. Rastelli, O. G. Schmidt, V. Zwiller
Hybrid semiconductor-atomic interface: slowing down single photons from a quantum dot
Nature Photon. **5**, 230 (2011)
13. S. Kiravittaya, H. S. Lee, L. Balet, L. H. Li, M. Francardi, A. Gerardino, A. Fiore, A. Rastelli, O. G. Schmidt

Tuning optical modes in slab photonic crystal by atomic layer deposition and laser-assisted oxidation

J. Appl. Phys. **109**, 053115 (2011)

14. J. D. Plumhof, V. Krápek, F. Ding, K. D. Jöns, R. Hafenbrak, P. Klenovský, A. Herklotz, K. Dörr, P. Michler, A. Rastelli, O. G. Schmidt
Strain-induced anticrossing of bright exciton levels in single self-assembled GaAs/Al_xGa_{1-x}As and In_xGa_{1-x}As/GaAs quantum dots
Phys. Rev. B **83**, 121302(R) (2011)
15. J. J. Zhang, A. Rastelli, O. G. Schmidt and G. Bauer
Role of the wetting layer for the SiGe Stranski–Krastanow island growth on planar and pit-patterned substrates
Semicond. Sci. Technol. **26**, 014028 (2011)

2010

16. J.J. Zhang, A. Rastelli, O.G. Schmidt, G. Bauer, *Compositional evolution of SiGe islands on patterned Si (001) substrates*
Appl. Phys. Lett. **97**, 203103 (2010)
17. M. Pfeiffer, K. Lindfors, C. Wolpert, P. Atkinson, M. Benyoucef, A. Rastelli, O. G. Schmidt, H. Giessen, M. Lippitz, *Enhancing the optical excitation efficiency of a single self-assembled quantum dot with a plasmonic nanoantenna*
Nano Lett. **10**, 4555 (2010)
18. A. Herklotz, J. D. Plumhof, A. Rastelli, O. G. Schmidt, L. Schultz, K. Dörr, *Electrical characterization of PMN–28%PT(001) crystals used as thin-film substrates*
J. Appl. Phys. **108**, 094101 (2010)
19. R. O. Rezaev, S. Kiravittaya, V. M. Fomin, A. Rastelli, O. G. Schmidt,
Engineering self-assembled SiGe islands for robust electron confinement in Si
Phys. Rev. B **82**, 153306 (2010)
20. J. J. Zhang, F. Montalenti, A. Rastelli, N. Hrauda, D. Scopece, H. Groiss, J. Stangl, F. Pezzoli, F. Schäffler, O. G. Schmidt, L. Miglio, G. Bauer
Collective shape oscillations of SiGe islands on pit-patterned Si(001) substrates: a coherent-growth strategy enabled by self-regulated intermixing
Phys. Rev. Lett. **105**, 166102 (2010)
21. F. Ding, H. Ji, Y. Chen, A. Herklotz, K. Dörr, Y. Mei, A. Rastelli and O. G. Schmidt,
Stretchable Graphene: A Close Look at Fundamental Parameters through Biaxial Straining
Nano Lett. **10**, 3453 (2010)
22. F. Ding, N. Akopian, B. Li, U. Perinetti, A. Govorov, F. M. Peeters, C. C. Bof Bufon, C. Deneke, Y. H. Chen, A. Rastelli, O. G. Schmidt, and V. Zwiller, *Gate controlled Aharonov-Bohm-type oscillations from single neutral excitons in quantum rings*
Phys. Rev. B. **82**, 075309 (2010)
23. N. Akopian, U. Perinetti, L. Wang, A. Rastelli, O. G. Schmidt, and V. Zwiller, *Tuning single GaAs quantum dots in resonance with a rubidium vapor*
Appl. Phys. Lett. **97**, 082103 (2010)
24. C. Hermannstädter, G. J. Beirne, M. Witzany, M. Heldmaier, J. Peng, G. Bester, L. Wang, A. Rastelli, O. G. Schmidt, and P. Michler, *Influence of the charge carrier tunneling processes on the recombination dynamics in single lateral quantum dot molecules*
Phys. Rev. B **82**, 085309 (2010)
25. G. Pernot, M. Stoffel, I. Savic, F. Pezzoli, P. Chen, G. Savelli, A. Jacquot, J. Schumann, U. Denker, I. Mönch, Ch. Deneke, O.G. Schmidt, J. M. Rampoux, S.

- Wang, M. Plissonnier, A. Rastelli, S. Dilhaire, and N. Mingo, *Precise control of thermal conductivity at the nanoscale via individual phonon scattering barriers* **Nature Materials** **9**, 491(2010)
26. G. Katsaros, P. Spathis, M. Stoffel, F. Fournel, M. Mongillo, V. Bouchiat, F. Lefloch, A. Rastelli, O. G. Schmidt, and S. De Franceschi, *Hybrid superconductor-semiconductor devices made from self-assembled SiGe nanocrystals on silicon* **Nature Nanotechnology** **5**, 458 (2010)
27. T. Lutz, T. Suzuki, G. Costantini, L. Wang, S. Kiravittaya, A. Rastelli, O.G. Schmidt, and K. Kern, *Reversing the shape transition of InAs/GaAs (001) quantum dots by etching-induced lateral In segregation* **Phys. Rev. B** **81**, 205414 (2010)
28. J. Peng, C. Hermannstädter, M. Witzany, M. Heldmaier, L. Wang, S. Kiravittaya, A. Rastelli, O.G. Schmidt, P. Michler, G. Bester, *Heterogeneous confinement in laterally coupled {InGaAs/GaAs} quantum dot molecules under lateral electric fields* **Phys. Rev. B** **81**, 205315 (2010)
29. J. Potfajova, B. Schmidt, M. Helm, T. Gemming, M. Benyoucef, A. Rastelli, and O. G. Schmidt, *Microcavity enhanced silicon light emitting pn-diode*, **Appl. Phys. Lett.** **96**, 151113 (2010)
30. J. D. Plumhof, V. Krapek, L. Wang, A. Schliwa, D. Bimberg, A. Rastelli, and O. G. Schmidt, *Experimental investigation and modeling of the fine structure splitting of neutral excitons in strain-free GaAs/AlGaAs quantum dots* **Phys. Rev. B** **81**, 121309(R) (2010)
31. O. Makarovskiy, S. Kumar, A. Rastelli, A. Patanè, L. Eaves, A.G. Balanov, O.G. Schmidt, R. Campion, and C. T. Foxon, *Direct laser writing of nanoscale light emitting diodes* **Adv. Mater.** **22**, 3176 (2010)
32. J.J. Zhang, N. Hrauda, H. Groiss, A. Rastelli, J. Stangl, F. Schäffler, O. G. Schmidt, and G. Bauer, *Strain engineering in Si via closely stacked, site-controlled SiGe islands* **Appl. Phys. Lett.** **96**, 193101 (2010)
33. F. Lipps, F. Pezzoli, M. Stoffel, C. Deneke, J. Thomas, A. Rastelli, V. Kataev, O. G. Schmidt, and B. Buchner, *Electron spin resonance study of Si/SiGe quantum dots* **Phys. Rev. B** **81**, 125312 (2010)
34. F. Ding, R. Singh, J.D. Plumhof, T. Zander, V. Krapek, Y.H. Chen, M. Benyoucef, V. Zwiller, K. Dörr, G. Bester, A. Rastelli, and O.G. Schmidt, *Tuning the Exciton Binding Energies in Single Self-Assembled InGaAs/GaAs Quantum Dots by Piezoelectric-Induced Biaxial Stress* **Phys. Rev. Lett.** **104**, 067405 (2010)

2009

35. M. Benyoucef, L. Wang, A. Rastelli, O. G. Schmidt, *Toward quantum interference of photons from independent quantum dots* **Appl. Phys. Lett.** **95**, 261908 (2009)
36. T. Zander, A. Herklotz, S. Kiravittaya, M. Benyoucef, F. Ding, P. Atkinson, S. Kumar, J. D. Plumhof, K. Dörr, A. Rastelli, and O. G. Schmidt, *Epitaxial quantum dots in stretchable optical microcavities* **Opt. Express** **17**, 22452 (2009)
37. H. S. Lee, S. Kiravittaya, S. Kumar, J. D. Plumhof, L. Balet, L. H. Li, M. Francardi, A. Gerardino, A. Fiore, A. Rastelli, and O. G. Schmidt, *Local tuning of photonic crystal nanocavity modes by laser-assisted oxidation* **Appl. Phys. Lett.** **95**, 191109 (2009)

38. J. J. Zhang, A. Rastelli, H. Groiss, J. Tersoff, F. Schäffler, O. G. Schmidt, and G. Bauer, *Shaping site-controlled uniform arrays of SiGe/Si(001) islands by in situ annealing*
Appl. Phys. Lett. **95, 183102 (2009)**
39. L. Wang, V. Křápek, F. Ding, F. Horton, A. Schliwa, D. Bimberg, A. Rastelli, and O. G. Schmidt, *Self-assembled quantum dots with tunable thickness of the wetting layer: Role of vertical confinement on interlevel spacing*
Phys. Rev. B **80, 085309 (2009)**
40. Vladimir A. Bolaños Quiñones, Gaoshan Huang, Johannes D. Plumhof, Suwit Kiravittaya, Armando Rastelli, Yongfeng Mei, and Oliver G. Schmidt, *Optical resonance tuning and polarization of thin-walled tubular microcavities*
Optics Letters **34, 2345 (2009)**
41. F. Pezzoli, M. Stoffel, T. Merdzhanova, A. Rastelli, and O. G. Schmidt, *Alloying and strain relaxation in SiGe islands grown on pit-patterned Si(001) substrates probed by nanotomography*
Nano. Res. Lett. **4, 1073 (2009)**
42. M. Stoffel, A. Malachias, A. Rastelli, T. H. Metzger, and O. G. Schmidt, *Composition and strain in SiGe/Si(001) “nanorings” revealed by combined x-ray and selective wet chemical etching methods*
Appl. Phys. Lett. **94, 253114 (2009)**
43. H. S. Lee, A. Rastelli, S. Kiravittaya, P. Atkinson, C. C. Bof Bufon, I. Mönch, and O. G. Schmidt, *Selective area wavelength tuning of InAs/GaAs quantum dots obtained by TiO₂ and SiO₂ layer patterning*
Appl. Phys. Lett. **94, 161906 (2009)**
44. C. Hermannstädter, M. Witzany, G. J. Beirne, W.-M. Schulz, M. Eichfelder, R. Rossbach, M. Jetter, P. Michler, L. Wang, A. Rastelli, and O. G. Schmidt, *Polarization fine structure and enhanced single-photon emission of self-assembled lateral InGaAs quantum dot molecules embedded in a planar microcavity*
J. Appl. Phys. **105, 122408 (2009)**
45. G. S. Huang, S. Kiravittaya, V. A. Bolaños Quiñones, F. Ding, M. Benyoucef, A. Rastelli, Y. F. Mei and O. G. Schmidt, *Optical properties of rolled-up tubular microcavities from shaped nanomembranes*
Appl. Phys. Lett. **94, 141901 (2009)**
46. E. Bonera, F. Pezzoli, A. Picco, G. Vastola, M. Stoffel, E. Grilli, M. Guzzi, A. Rastelli, O. G. Schmidt, and L. Miglio, *Strain in a single ultrathin silicon layer on top of SiGe islands: Raman spectroscopy and simulations*
Phys. Rev. B **79, 075321 (2009)**
47. Jeremy T. Robinson, Armando Rastelli, Oliver Schmidt and Oscar D. Dubon, *Global faceting behavior of strained Ge islands on Si*
Nanotechnology **20, 085708 (2009)**
48. H. S. Lee, A. Rastelli, M. Benyoucef, F. Ding, T. W. Kim, H. L. Park and O. G. Schmidt, *Microphotoluminescence spectroscopy of single CdTe/ZnTe quantum dots grown on Si(001) substrates*
Nanotechnology **20, 075705 (2009)**
49. M. Benyoucef, H. S. Lee, J. Gabel, T. Whan Kim, H. Lee Park, A. Rastelli and O. G. Schmidt, *Wavelength tunable triggered single-photon source from a single CdTe quantum dot on silicon substrate*
Nano Letters **9, 304 (2009)**

2008

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