EUROPEAN CURRICULUM VITAE FORMAT

PERSONAL INFORMATION

First name / Surname / Title	**Mladen Petravic,** Professor of Physics
Address	Department of Physics and Center for Micro and Nano Sciences and Technologies, University of Rijeka, R. Matejcic 2, 51000 Rijeka, Croatia
Telephone	+ 385 – 51 – 584622
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E-mail	mpetravic@phy.uniri.hr
Country of birth	Croatia
Citizenship	Croatian and Australian

ACADEMIC QUALIFICATION

• Date	1989 - 1993
Place of education	Canberra, Australia
Name and type of organisation	Australian National University
Title or qualification awarded	PhD in Physics, Thesis: "SIMS and ESD Studies of Semiconductor Structures"
• Date	1987 -1989
Place of education	Zagreb, Croatia
Name and type of organisation	University of Zagreb – Faculty of Science
Title or qualification awarded	MSc in Physics, Thesis: "Hall Effect in Anisotropic Superconductors"

ACADEMIC AWARDS

•Year	1989
Award	Commonwealth Postgraduate Research Award
•Year	1991
Award	Australian Postgraduate Research Award
•Year	1992
Award	Australian Research Council Postdoctoral Fellowship

MEMBERSHIP OF PROFESSIONAL INSTITUTES

Fellow	Australian Institute of Physics
Fellow	Croatian Physical Society
Member	Vacuum Society of Australia
Member	IUVISTA - Applied Surface Science College

MAIN RESEARCH INTERESTS

- X-ray spectroscopy from semiconductor surfaces and nanostructures
- synchrotron-based photoemission and photoabsorption from semiconductor surfaces and nanostructures
- laser postionisation spectrometry (including the use of free electron lasers)
- ion beam analysis, characterisation and modifications of semiconductor materials
- SIMS, fundamentals and applications
- atomic collisions, sputtering and ionisation processes, phase transitions in solids

EMPLOYMENT HISTORY

• Dates (from – to)	2008 - present
Name and address of employer	University of Rijeka – Department of Physics and Center for Micro and Nano Sciences and Technologies, Rijeka, Croatia
Type of business or sector	Research, Higher Education
Occupation or position held	Professor, Head of Experimental and Applied Physics and Head of Center
Main activities and responsibilities	Teaching at the undergraduate and postgraduate levels; Supervision of Graduate and PhD Students; Research in Semiconductor Physics, Surface and Materials Science, Application of Synchrotron Radiation

• Dates (from – to)	2007 - 2008
Name and address of employer	University of Rijeka – Department of Physics, Rijeka, Croatia
Type of business or sector	Research, Higher Education
Occupation or position held	Professor and Head of Department
Main activities and responsibilities	Teaching at the undergraduate and postgraduate levels; Supervision of Graduate and PhD Students; Research in Semiconductor Physics, Surface Science, Application of Synchrotron Radiation

• Dates (from – to)	2006 – 2007
Name and address of employer	University of Rijeka – Faculty of Arts and Sciences, Department of Physics, Rijeka, Croatia
Type of business or sector	Research, Higher Education
Occupation or position held	Professor
Main activities and responsibilities	Teaching at the undergraduate and postgraduate levels; Research in Semiconductor Physics, Surface Science, Application of Synchrotron Radiation

• Dates (from – to)	1996 – 2006
Name and address of employer	Australian National University, Canberra, Australia
Type of business or sector	Research, Higher Education
Occupation or position held	Head of Laboratory for Secondary Ion Mass Spectrometry, Fellow
Main activities and responsibilities	Research in Semiconductor Physics and Ion-beam Analysis; supervision of graduate and PhD students and teaching at the undergraduate level

• Dates (from – to)	1989 – 1996
Name and address of employer	Australian National University, Canberra, Australia
Type of business or sector	Research, Higher Education
Occupation or position held	PhD Student (1989-1993) and ARC Postdoctoral Fellow (1993-1996)
Main activities and responsibilities	Research in Semiconductor Physics and Ion-beam Analysis

• Dates (from – to)	1987 – 1989
Name and address of employer	Institute of Physics, Zagreb, Croatia
Type of business or sector	Research Institute
Occupation or position held	Research Associate
Main activities and responsibilities	Research in Experimental Solid State Physics and High T_c Superconductivity

TRAINING

• Year	1994
Place of training	Haifa, Israel
Name and type of organisation	Technion, University
Principal subject	Surface Science

• Year	1996 - 1999 (visits of few weeks each year)
Place of training	Orsay, France
Name and type of organisation	LURE, Research Institute; Universite de Paris-Sud, University

Principal subjects	Research using Synchrotron Radiation; Experimental Solid State Physics
• Year	1997
Place of training	Stockholm, Sweden
Name and type of organisation	The Royal Institute of Technology, University
Principal subject	Experimental Solid State Physics, SIMS
• Year	1998
Place of training	Osaka, Japan
Name and type of organisation	Osaka National Research Institute, Research Institute
Principal subject	Semiconductor Physics
• Year	1999 - 2014 (regular visits of few weeks/year)
Place of training	Hsinchu, Taiwan
Name and type of organisation	National Synchrotron Radiation Research Centre, Research Institute
Principal subject	Research using Synchrotron Radiation, Surface science, Nanotechnology
• Year	2000 - 2003 (visits of few weeks each year)
Place of training	Pohang, South Korea
Name and type of organisation	Pohang Accelerator Laboratory, Research Institute
Principal subject	Surface Science, Research using Synchrotron Radiation
• Year	2001
Place of training	Melbourne, Australia
Name and type of organisation	La Trobe University, University
Principal subject	Semiconductor Physics
• Year	2002 - 2004 (regular visits of few months/year)
Place of training	Chicago, USA
Name and type of organisation	Argonne National Laboratory, Research Institute
Principal subject	Surface Science, Applications of Free Electron Lasers
•Year	2010 - 2012 (visits of few weeks each year)
Place of training	Melbourne
Name and type of organisation	Australian Synchrotron
Principal subject	Surface Science, Nanotechnology, Research using Synchrotron Radiation
•Year	2010 - 2013 (visits of few weeks each year)
Place of training	Geelong
Name and type of organisation	Deakin University
Principal subject	Nanotechnology

TEACHING AND TEACHING DEVELOPMENT

DEVELOPMENT OF NEW PROGRAMS OF STUDY AND NEW COURSES	Designed and implemented a new multidisciplinary graduate program of study "Engineering and Physics of Materials" with the participation of Department of Physics and Faculty of Engineering of the University of Rijeka; Designed and introduced three new courses for Physics Major at the University of Rijeka: Solid State Physics, Semiconductor Physics and Laboratory Project

TEACHING

At undergraduate and graduate programs in Physics Major, Physics and Mathematics and Engineering and Physics of Materials:
Electricity and Magnetism
Solid State Physics
Semiconductor Physics
Measurements in Physics
Laboratory Project
Physics Seminar

At undergraduate programs in Computer Science and Polytechnic:
Fundamentals of Physics

At undergraduate programs in Biotechnology and Medicine: Biophysics

SERVICES TO THE UNIVERSITY

Member of the Senate (2007-2008), Advisory Committee for Science and Technology (2007-2008) and Advisory Committee for Research (2007-2008);
Head of Department of Physics (2007-2008), Experimental and Applied Physics (2008-2012) and Center for Micro and Nano Sciences and Technologies (2012-present);
Coordinator of the Croatian Fusion Group at the University level (2013-present).

SERVICES TO THE COMMUNITY

Representative of the Republic of Croatia in the EU Commission for the Mobility of Scientists (2006) and the PF7 Program Euratom (2007);
Member of the State Physics Council (2009-2013), the Science Council (2013-present) and the Scientific Infrastructure Committee of The Ministry of Science (2012-2014);
Member of the Board of Directors of the Institute of Physics, Zagreb (2012-present);
Member and representative of Croatia in IUVISTA - Applied Surface Science College (2013-present).

PERSONAL SKILLS AND COMPETENCIES

SOCIAL SKILLS AND COMPETENCIES

Team work, strengthening of interpersonal relationships, resolving conflict situations

ORGANISATIONAL SKILLS AND COMPETENCIES

Acted as Head of interdisciplinary Departments and Centers;
Established and led research groups and international scientific collaborations;
Designed new laboratories and obtained funding for equipment;
Organised summer schools, conferences and workshops.

TECHNICAL SKILLS AND COMPETENCIES

Working experience with a range of analytical techniques (XPS, SIMS, RBS, NEXAFS, XTEM);
Working experience in running ion implanter facilities;
Working experience with synchrotron radiation techniques;
Knowledge of Windows and OS operational systems and packages for data analysis and presentation.

OTHER SKILLS AND COMPETENCIES

Author or co-author of more than 130 scientific papers;
CI and PI of more than 20 projects;
Member of Organising Commeetees of several international conferences;
Invited and key note speaker at several international conferences;
Referee for scientific journals and domestic and international grant agencies.

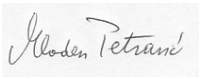
DRIVING LICENCE

B and C category

ADDITIONAL INFORMATION

Fellow of the Australian Institute of Physics;
Justice of the Peace in the Australian Capital Territory;
Certificate of Appreciation from the Chief Minister of the Australian Capital Territory for the work in the Australian multicultural community;
Republic of Croatia 'Croatian wattle' Medal for the contribution in establishment of Croatian diplomatic missions in Australia.

SIGNATURE



List of Publications:

i) Book Chapters

ii) Publications in Refereed Journals

iii) Publications in Refereed Conference Proceedings

i) Book Chapters

1. B.V.King, M.A.Sobhan and M.Petravic, 'Ion beam mixing in metals', in "Surface Science, Principles and Current Applications" (R.J.MacDonald, E.C.Taglauer and K.R.Wandelt, Eds., Springer-Verlag, Berlin 1996) p.127-135.

ii) Publications in Refereed Journals

1. M.Petravic, A.Hamzic, B.Leontic and L.Forro, 'Temperature dependence of the Hall effect in $La_{2-x}Sr_xCuO_4$ and $ABa_2Cu_3O_7$ (A=Y,Gd) high temperature superconductors', *International Journal of Modern Physics* **B1**, 1067 (1987).

2. M.Petravic, E.Tutis, A.Hamzic and L.Forro, 'Hall effect measurements in $La_{2-x}Sr_xCuO_4$', *Solid State Commun.* **65**, 573 (1988).

3. L.Forro, M.Petravic and B.Leontic, 'Hall effect of the high T_c superconductors Y-Ba-Cu-O and Gd-Ba-Cu-O', *Solid State Commun.* **65**, 1355 (1988).

4. J.R.Cooper, M.Petravic D.Drobac, B.Korin, N.Brnicevic, M.Paljevic and G.Collin, 'Low temperature AC susceptibility of ytrium barium copper oxide single crystals: attempts to measure the superconducting penetration depth', *Physica* **C153-155**, 1491 (1988).

5. M.Petravic, L.Forro, J.R.Cooper and F.Levy, 'Hall effect in the charge density wave system $(NbSe_4)_{10/3}I$', *Phys.Rev.* **B40**, 2885 (1989).

6. M.Petravic, L.Forro, J.R.Cooper and F.Levy, 'High-pressure study of a charge density wave compound $(NbSe_4)_{10/3}I$', *Phys.Rev.* **B40**, 8064 (1989).

7. M.C.Ridgway, R.G.Elliman, M.Petravic, R.P.Thornton and J.S.Williams, 'The influence of implanted impurities on the termally-induced epitaxial recrystallization of $CoSi_2$', *J.Mat.Res.* **6**, 1035 (1991).

8. M.Petravic and J.S.Williams, 'Ion-induced noncollisional ejection of positive secondary ions', *Surf.Sci.* **259**, 215 (1991).

9. M.Petravic and J.S.Williams, 'Core ionization and ion ejection during SIMS analysis', *Nucl.Instrum.Meth.* **B64**, 659 (1992).

10. J.S.Williams, M.Petravic, Y.H.Li, J.A.Davies and G.Palmer, 'Precipitation and segregation of Sb at Si-SiO_2 interfaces during thermal oxidation', *Nucl. Instrum.Meth.* **B64**, 156 (1992).

11. L.Claphman, J.L.Whitton, M.C.Ridgway, N.Hauser and M. Petravic, 'High-dose, heavy-ion implantation into metals-the use of a sacrificial carbon surface layer for increased dose retention, *J.Appl.Phys.* **72**, 4014 (1992).

12. M.Petravic, B.G.Svensson and J.S.Williams, 'On the estimation of depth resolution during sputter profiling', *Appl.Phys.Lett.* **62**, 278, (1993).

13. J.S.Williams, R.G.Elliman, M.C.Ridgway, C.Jagadish, S.L.Ellingboe, R.Goldberg, M. Petravic, W.C.Wong, Z.Dezhang, E.Nygren and B.G.Svensson, 'MeV implantation into semiconductors', *Nucl.Instrum.Meth.* **B80/81**, 507 (1993).

14. B.G.Svensson, M.C.Ridgway and M. Petravic, 'Isotope effect for mega-electronvolt boron ions in amorphous silicon', *J.Appl.Phys.* **73**, 4836 (1993).

15. M. Petravic, J.S.Williams, and C.W.Wong, 'Electron stimulated desorption of positive and negative ions from SiO_2/Si surfaces', *Nucl.Instrum.Meth.* **B67**, 333 (1993).

16. S.Prawer, A.Hoffman, M. Petravic and R.Kalish, 'Conductivity in insulators due to implantation of conducting species', *J.Appl.Phys.* **73**, 3841 (1993).

17. M.Petravic, 'Desorption of positive and negative ions from SiO_2/Si surfaces by electron excitation of core levels', *Phys.Rev.* **B48**, 2627 (1993).

18. C.Jagadish, A.Clark, G.Li, C.A.Larsen, N.Hauser, M.Petravic, T.D.Thompson, T.Halstead and J.S.Williams, 'Characterization of III-V Multilayers Grown by Low-Pressure Metal Organic Vapour phase Epitaxy', *Aust.J.Phys.* **46**, 435 (1993).

19. J.S.Williams, R.D.Goldberg, M.Petravic and Z.Rao, 'Phase transformations and compound formation during ion irradiation of materials', *Nucl.Instrum.Meth.* **B84**, 199 (1994).

20. M.Petravic, 'Depth resolution during sputter profiling of Si in GaAs', *Nucl.Instrum.Meth.* **B85**, 388 (1994).

21. B.G.Svensson, M.Linnarsson, B.Mohadjeri, M. Petravic and J.S.Williams, 'SIMS and depth profiling of semiconductor structures', *Nucl.Instrum.Meth.* **B85**, 363 (1994).

22. J.S.Williams, M.Petravic, B.G.Svensson and M.Conway, 'Oxidation of silicon by low energy oxygen bombardment'', *J.Appl.Phys* .**76**, 1840 (1994).

23. B.G.Svensson, B.Mohadjeri and M.Petravic, 'Surface recession and oxidation of silicon during bombardment by low energy oxygen ions', *J.Appl.Phys.* **76**, 3831 (1994).

24. J.Wong-Leung, C.E.Asheron, M.Petravic, R.G.Elliman and J.S.Williams, 'Gettering of copper to hydrogen-induced cavities in silicon', *Appl.Phys.Lett.* **66**, 1231 (1995).

25. M.Petravic and J.S.Williams, 'Desorption of positive and negative fluorine ions from BaF_2 surfaces by core level excitation under electron bombardment', *J.Vac.Sci.Technol.* **A13**, 26 (1995).

26. M.Petravic and J.S.Williams, 'Electronic effects in ion-stimulated desorption of positive halogen ions from semiconductor surfaces', *Nucl.Instrum.Meth.* **B101**, 64 (1995).

27. A.Hoffman, S.Moss, P.J.K.Patterson and M.Petravic, 'Electron stimulated desorption of positive and negative ions from $YBa_2Cu_3O_7$ surfaces', *J.Appl.Phys.* **78**, 6858 (1995).

28. G.Li, M.Petravic and C.Jagadish, 'Growth of Zn d-doped $Al_xGa_{1-x}As$ by low pressure metal organic vapour phase epitaxy', *J.Appl.Phy.* **78**, 3546 (1995).

29. M.Petravic, J.S.Williams and A.Hoffman, 'Resonantlike desorption of negative ions by core- level excitation under electron bombardment', *Phys.Rev.* **B53**, 4257 (1996).

30. G.Li, M.Petravic and C.Jagadish, 'Very high carbon d-doping concentration in $Al_xGa_{1-x}As$ grown by metal organic vapour phase epitaxy using trimethylaluminium as a doping precursor', *J.Appl.Phys*. **79**, 3554 (1996).

31. A.Hoffman and M.Petravic, 'Electron stimulated desorption of negative and positive hydrogen ions from hydrogenated silicon surfaces', *Phys.Rev.* **B53**, 6996 (1996).

32. B.Mohadjeri, M.Petravic, and B.G.Svensson, 'Oxidation-enhanced roughening of thin Co films during sputtering by O_2^+ ions'', *J.Vac.Sci.Technol.* **A14**, 2192 (1996).

33. M.Petravic, B.G.Svensson, J.S.Williams and J.M.Glasko, 'Segregation effects in SIMS profiling of impurities in silicon by low energy oxygen ions', *Nucl.Instrum.Meth.* **B118**, 151 (1996).

34. K.S.Jones, R.G.Elliman, M.Petravic and P.Kringhoj, 'Using doping superlattices to study transient enhanced diffusion of boron in regrown silicon', *Appl.Phys.Lett.* **68**, 3111 (1996).

35. J.S.Williams, K.T.Short, M.Petravic and B.G.Svensson, 'Oxidation of silicon by low energy oxygen ions', *Nucl.Instrum.Meth.* **B121**, 24 (1997).

36. A.Kinomura, J.Wong-Leung, M.Petravic and J.S.Williams, 'Gettering of platinum and silver to cavities formed by hydrogen implantation in silicon', *Nucl.Instrum.Meth.* **B127/128**, 297 (1997).

37. G.Li, M.Petravic and C.Jagadish, 'Electrical activation of carbon d-doped (Al,Ga)As grown by metal organic vapour-phase epitaxy', *J. Crystal Growth* **173**, 302 (1997).

38. A.Kinomura, J.S.Williams, J.Wong-Leung and M.Petravic, 'Microstructural difference between platinum and silver trapped in hydrogen induced cavities in silicon', *Appl.Phys.Lett.* **72**, 2713 (1998).

39. I.Guzman, A.Hoffman, G.Comtet, L.Hellner, G.Dujardin and M.Petravic,, 'Nanosize Diamond Formation Promoted By Direct Current Glow Discharge Process - Synchrotron Radiation And High Resolution Electron Microscopy Studies' *Appl.Phys.Lett.* **72**, 2517 (1998).

40. B.G.Svensson, M.K.Linnarsson, J.Cardenas and M.Petravic, 'SIMS analysis of epitaxial layers for power- and micro-electronics', *Nucl.Instrum.Meth.* **B136-138**, 1034 (1998).

41. J.Wong-Leung, J.S.Williams, and M.Petravic, 'The influence of cavities and point defects on boron diffusion in silicon', *Appl.Phys.Lett.* **72**, 2418 (1998).

42. J.S.Williams, M.Conway, J.A.Davies, M.Petravic, H.H.Tan and J.Wong-Leung, 'Analysis of semiconductors by ion chaneling: applications and pitfalls', *Nucl.Instrum.Meth.* **B136-138**, 453 (1998).

43. A.Hoffman, G.Comtet, L.Hellner, G.Dujardin and M.Petravic, 'Surface near-edge x-ray adsorption fine structure of hydrogenated diamond films and Di(100) surfaces studied by H^+ and H^- ion desorption', *Appl.Phys.Lett.* **73**, 1152 (1998).

44. M.Petravic, 'On the segregation of metals during low energy oxygen bombardment of silicon', *Appl.Surf.Sci.* **135**, 200 (1998).

45. G.Li, K.E.Prince, M.Petravic, S.J.Chua and C.J.Jagadish, 'Substrate orientation effect on Zn d-doping in GaAs grown by metal organic vapour phase epitaxy', *J. Crystal Growth* **191**, 357 (1998).

46. Shu Yuan, C.Jagadish, Y.Kim, Y.Chang, H.H.Tan, R.M.Cohen, M.Petravic, L.V.Dao, M.Gal, M.C.Y.Chan, E.H.Li, J.S.O and P.S.Zory, 'Anodic-oxide induced intermixing in GaAs/AlGaAs quantum well and quantum wire structures', *IEEE J.Select.Topics in Quantum Electronics* **4**, 629 (1998).

47. M.Petravic, J.S.Williams, M.Conway and P.N.K.Deenapanray 'On the nitridation of silicon by low energy nitrogen bombardment', *Appl.Phys.Lett.* **73**, 1287 (1998).

48. J.Cardenas, B.G.Svensson and M.Petravic, 'Evidence for the influence of thermal spikes on ion induced mixing in Si at energies between 3 and 300 keV', *J.Appl.Phys.* **84**, 4809 (1998).

49. A.Kinomura, J.S.Williams, J.Wong-Leung, M.Petravic, Y.Nakano and Y.Hayashi, 'Efficient gettering of low concentrations of copper contamination to hydrogen induced nanocavities in silicon', *Appl.Phys.Lett.* **73**, 2639 (1998).

50. P.N.K.Deenapanray and M.Petravic, 'Angular and energy dependence of the ion beam oxidation of Si using

oxygen ions from a dupolasmatron source', *Surf.Interf.Analys.* **27**, 92 (1999).

51. A.Hoffman, M.Petravic, G.Comtet, L.Hellner, G.Dujardin and A.Heurtel, 'Photon stimulated desorption of positive and negative hydrogen ions from diamond surfaces: evidence for direct and indirect processes', *Phys.Rev.* **B59**, 3203 (1999).

52. P.N.K.Deenapanray and M.Petravic, 'On the migration behavior of metal impurities in Si during SIMS profiling using low-energy oxygen ions', *J.Appl.Phys.* **85**, 3993 (1999).

53. J.S.Williams, M.J.Conway, J.Wong-Leung, P.N.K.Deenapanray, M.Petravic, R.A.Brown, D.J.Eaglesham and D.C.Jacobson, 'The role of oxygen on the stability of gettering of metals to cavities in silicon', *Appl.Phys.Lett.* **75**, 2424 (1999).

54. P.N.K.Deenapanray and M.Petravic, 'Segregation effects of Li, K and F in Si during depth profiling by oxygen ions', *J.Appl.Phys.* **87**, 2178 (2000).

55. P.N.K.Deenapanray and M.Petravic, 'On the segregation of Ca at SiO_2/Si interface during oxygen ion bombardment', *Surf.Interf.Analysis* **29**, 160 (2000).

56. M.Petravic, P.N.K.Deenapanray, G.Comtet, L.Hellner, G.Dujardin, and B.F.Usher, 'Selective Photon-Stimulated Desorption of Hydrogen from GaAs Surfaces', *Phys.Rev.Lett.* **84**, 2255 (2000).

57. D.W.Moon, J.Y.Won, K.J.Kim, H.J.Kim, H.J.Kang and M.Petravic, 'GaAs delta-doped layers in Si for evaluation of SIMS depth resolution'', *Surf.Interf.Analysis* **29**, 362 (2000).

58. P.N.K.Deenapanray, H.H.Tan, M.I.Cohen, K.Gaff, M.Petravic, C.Jagadish, 'Silane flow rate dependence of SiO_x cap layer induced impurity-free intermixing of GaAs/AlGaAs quantum wells', *J.Electrochem.Soc.***147**, 1950 (2000).

59. P.N.K.Deenapanray, L.Fu, M.Petravic, C.Jagadish, B.Gong and R.N.Lamb, 'Pulsed anodic oxidation of GaAs for impurity-free interdiffusion og GaAs/AlGaAs quantum wells', *Surf.Interf.Analysis* **29**, 754 (2000).

60. B.Stritzker, M.Petravic, J.Wong-Leung and J.S.Williams, 'Selectivity of nanocavities and dislocations for gettering of Cu and Fe in silicon', *Appl.Phys.Lett.* 78, 2682 (2001).

61. B.Stritzker, M.Petravic, J.Wong-Leung and J.S.Williams, 'Efficiency of dislocations and cavities for gettering of Cu and Fe in silicon', *Nucl.Instrum.Meth.* **B175-177**, 154 (2001).

62. P.N.K.Deenapanray and M.Petravic, 'Low energy O_2^+ and N_2^+ beam-induced profile broadening effects in Si', *J.Vac.Sci.Technol.* **A19**, 893 (2001).

63. J.S.Williams, M.C.Ridgway, M.J.Conway, J.Wong-Leung, X.F.Zhu, M.Petravic, F.Fortuna, M.-O.Ruault, H.Bernas, A.Kinomura, Y.Nakano and Y.Hayashi, 'Interaction of defects and metals with nanocavities in silicon', *Nucl.Instrum.Meth.* **B178**, 33 (2001).

64. M.Petravic and P.N.K.Deenapanray, 'Electrical transients in the ion-beam induced nitridation of silicon', *Appl.Phys.Lett.* **78**, 3445 (2001).

65. M.J.McCann, K.J.Weber, M.Petravic and A.W.Blakers, 'Boron Doping of Silicon Layers Grown by Liquid-Phase-Epitaxy', *J. Crystal Growth* **241**, 45 (2002).

66. M.Petravic, P.N.K.Deenapanray, B.F.Usher, K.-J.Kim and B.Kim, 'High-resolution photoemission study of hydrogen interaction with polar and non-polar GaAs surfaces', *Phys.Rev.***B67**, 195325 (2003).

67. M.Petravic, P.N.K.Deenapanray, K.-J.Kim and B.Kim, 'Compositional changes on GaN surfaces under low-energy ion bombardment studied by synchrotron-based spectroscopies', *Appl.Phys.Lett.***83**, 4948 (2003).

68. M.Petravic, P.N.K.Deenapanray, V.A.Coleman, K.-J.Kim, B.Kim and G.Li, 'Core-level photoemission and near edge x-ray absorption fine structure studies of GaN surface under low-energy ion bombardment', *J.Appl.Phys*. **95**, 5487 (2004).

69. I. V. Veryovkin, W. F. Calaway, J. F. Moore, M. J. Pellin, S.V.Milton, B.V.King and M. Petravic, 'A new horizon in secondary neutral mass spectrometry: post-ionization using a VUV free electron laser',

Appl.Surf.Sci. **231**, 962 (2004).

70. P.N.K.Deenapanray, M.Petravic, C.Jagadish, M.Krispin, and F.D.Auret, 'Influence of spin-on-glass doping on defect creation and impurity segregation in impurity-free disordered p-type GaAs, *J.Appl.Phys.* **97**, 033524 (2005).

71. M.Petravic, V.A.Coleman, K.-J.Kim, B.Kim and G.Li, 'Defect acceptor and donor in ion-bombarded GaN", *J.Vac.Sci.Technol.* **A23**, 1340 (2005).

72. V.A.Coleman, M.Petravic, K.-J.Kim, B.Kim and G.Li, 'Near-edge X-ray absorption fine-structure studies of GaN under low-energy nitrogen ion bombardment', *Appl.Surf.Sci.* **252**, 3413 (2006).

73. M.Petravic, P.N.K.Deenapanray, V.A.Coleman, K-J.Kim, B.Kim, C.Jagadish, K.Kioke, S.Sasa, M.Inoue and M.Yano, 'Characterisation of nitrogen in ZnO by near-edge x-ray absorption fine structure and core-level photoemission spectroscopies', *Surface Sci.* **600**, L81 (2006).

74. M.Petravic, P.N.K.Deenapanray, M.D.Fraser, A.V.Soldatov, Y.-W.Yang, P.A.Anderson and S.M.Durbin, 'Direct observation of defect levels in InN by soft x-ray absorption', *J.Phys.Chem.* **B110**, 2984 (2006).

75. M.Petravic, Q.Gao, D.Llewellyn, P.N.K.Deenapanray, D.Macdonald and C.Crotti, 'Broadening of vibrational levels in x-ray absorption spectroscopy of molecular nitrogen in compound semiconductors', *Chem.Phys.Lett.* **425**, 262 (2006).

76. P.L.Gareso, M.Buda, M.Petravic, H.H.Tan and C.Jagadish, 'Effect of rapid thermal annealing on the atomic intermixing of Zn- and C-doped InGaAs/AlGaAs quantum well', *J.Electrochem.Soc.* **153**, G879 (2006).

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