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## **2015**

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## **II.2 Conférences invitées (Ci)**

### **1987**

1. Etude par photoémission de la passivation de GaAs en plasmas multipolaires d'hydrogène et d'azote P. Friedel, **P. Ruterana**, J.P. Landesmann, Journées III-V Aussois 7-9 Janvier 1987, **Conférence invitée**

### **1989**

2. Characterization by transmission electron microscopy of wedge shaped semiconductor samples, J.D. Ganière, F.K. Reinhart, R. Spycher, B. Burqui, A. Catana, **P. Ruterana**, P.A. Stadelmann, P.A. Buffat, Colloque Franco-Suisse de Microscopie électronique, Grenoble, St Martin d'Hères, 7-12 juillet 1989, **Conférence invitée**

### **1990**

3. A Study of composition and structure in heterogeneous catalysts by analytical and high resolution TEM, **P. Ruterana**, and P. Buffat, Colloque, Groupe d'Analyse Chimique Interdisciplinaire, Lausanne 12-14 dec. 1990 **Conférence Invitée**

### **1992**

4. Low d-Spacing Titanium based Multilayers for neutrons, P. Boher, P. Houdy, A. Magerl, K. Yamada, Y. Endoh and **P. Ruterana**, SPIE 1992 International Conference 19-24 July 1992 San Diego, **Conférence invitée**

### **1994**

5. Wedge Cleavage for TEM Sample preparation, **P. Ruterana**, International Conference on Electron Microscopy, 13 Paris 18 juillet 1994, **Conférence invitée**.

### **1997**

6. High indium content InGa<sub>N</sub> films and quantum wells, W. Van der Stricht, K. Jacobs, I. Moerman, F. Demester, L. Considine, E.J. Thrush, J.A. Crawley, and **P. Ruterana**, Materials Research Society 1997 fall meeting, Boston 1-5 dec **Conférence invitée**.

### **1998**



7. Ordering and phase separation in  $\text{In}_x\text{Ga}_{1-x}\text{N}$  layers grown by MOVPE, International Workshop 'Laser Quantique à base de Nitrures', Lausanne, 16-17 janvier 1998, **P. Ruterana**, **Conférence invitée**

### **1999**

8. The atomic structure of the dislocations and planar boundaries in GaN, **P. Ruterana**, Microscopy of Semiconducting Materials Conference, Oxford 22-25 Avril 1999, **Conférence invitée**

9. High resolution electron microscopy of advanced materials, **G. Nouet**, **P. Ruterana**, V. Potin, in Summer School, advanced materials for industrial applications, Kavala, Grèce, 20-27 juin 1999, **Conférence invitée**

10. Analysis of structural defects in GaN by high resolution electron microscopy, **G. Nouet**, **P. Ruterana**, and V. Potin 2<sup>nd</sup> Balkan Workshop on Physics of Materials, Thessalonique, 28 sept-6 oct 1999, **Conférence invitée**

### **2000**

11. The correlation between the atomic structure of extended defects and the optical properties of GaN epitaxial layers. European Materials Research Society Spring Meeting, Strasbourg 30 mai-2 juin 2000, **P. Ruterana**  
**Conférence invitée**

12. Microscopie électronique appliquée aux nitrures d'éléments III, **P. Ruterana**, Ecole Thématique CNRS, Délégation Province Côte d'Azur, 27-31 Mars 2000, Orcières Merlette, **Conférence invitée**

13. The atomic structure and formation mechanisms of extended defects in Ga based nitrides  
**P. Ruterana**, Extended Defects in Semiconductors, Brighton 18-22 juillet 2000, **Conférence invitée**

14. Interface GaN avec substrats carbure de silicium ou alumine, défauts induits dans le volume, **G. Nouet**, **P. Ruterana**, Joints intergranulaires et interfaces, Fontainebleau 4-6 octobre 2000, **Conférence invitée**

### **2001**

15. Nanostructure of Metal/Semiconductor System by Synchrotron X-ray Scattering, C. C. Kim, Y.K. Hwu, **P. Ruterana**, and **J. H. Je**, ICMAT, Singapore Juillet 2001, 2001, **Conférence invitée**

16. High resolution electron microscopy in materials science, **P. Ruterana**, Workshop on Advanced Materials for Nanotechnology, Pohang (Corée), 22-23 novembre 2001, **Conférence invitée**

### **2002**

17. The extended defects in GaN : formation mechanisms and influence on layers optical properties, **P. Ruterana**, P. Gibart and M. Albrecht, Office of Naval Research Workshop on extended defects , 27-31<sup>st</sup> janvier 2002 , Belize,  
**Conférence invitée**

18. Analysis of the atomic structure of defects and interfaces in nitride semiconductor compounds and alloys, XI international conference on electron microscopy, **P. Ruterana**, 19-23 Mai 2002, Krynica-Pologne, **Conférence invitée**

19. Quantitative analysis of local stress by HREM, **P. Ruterana**, International Workshop on Metallic Multilayers, 25-27 septembre 2002, Varsovie, Pologne, **Conférence invitée**

20. Ordering in undoped hexagonal  $\text{Al}_x\text{Ga}_{1-x}\text{N}$  grown on sapphire (0001) with  $0.09 < x < 0.247$ , **M. Laügt**, E. Bellet-Amalric, **P. Ruterana**, F. Omnès, International Conference on ternary materials and compounds (ICTMC 13- Paris 14-18 octobre 2002) **Conférence invitée**

21. Microscopie électronique en science des matériaux, **P. Ruterana**, First meeting of the African Materials Research Society, Dakar 10-17 Décembre 2002, **Conférence Invitée**

### **2003**

22. Quantitative images from interference contrast in electron microscopy, **G. Nouet**, **P. Ruterana**, Swiss-Korea Workshop on microradiology of materials, Jeju (Corée du Sud), 18-23 february 2003, **Conférence invitée**

23. The microstructure of MBE rare earth doped GaN, **P. Ruterana**, T. Woytowicz, A. Braud, JL Doualan, and R. Moncorgé, Workshop on Impurity based electroluminescence in Wide bandgap semiconductors, Santa Fe, New Mexico (USA) 13-16 avril 2003, **Conférence Invitée**

24. Atomic structure studies of threading dislocations and grain boundaries in GaN, **P. Ruterana**, Jun Chen, G. Nouet, 8<sup>ème</sup> Conférence de la Société Française des Microscopies, Toulon 23-26 juin 2003, **Conférence Invitée**

25. Inversion domains formation in GaN layers grown on the (111) silicon surface, **P. Ruterana**, Ana Sanchez and G. Nouet in ONR Workshop on extended defects in Wide Band Gap Semiconductors Irvington, Virginia, USA, 13-17 juillet 2003, **Conférence Invitée**

26. Interfacial structures of GaN/sapphire and Co/Si using synchrotron Xrays, C.C. Kim, T.S. Kang, J.H. Je, **P. Ruterana** and Y. Hwu International conference 'Nanomaterials and Nanotechnologies' Crète, Grèce, 30 Août-6 septembre 2003, **Conférence Invitée**
27. Quantitative evaluation of composition fluctuations at nanometer scale inside InGaN/GaN heterostructures, **P. Ruterana**, 1st French-Korea workshop on nanostructures and nanomaterials, Pohang, Corée, le 20-21 Octobre 2003, **Conférence invitée**
28. Metal/GaN Interfacial Nanostructures and their Electrical Properties, C.C. Kim , J.H. Je, and **P. Ruterana**, 1st French-Korea workshop on nanostructures and nanomaterials, Pohang, Corée, le 20-21 Octobre 2003, **Conférence invitée**
29. Atomistic analysis of grain boundaries in GaN, J.Chen, **P. Ruterana** and G. Nouet, 1st French-Korea workshop on nanostructures and nanomaterials, Pohang, Corée, le 20-21 Octobre 2003, **Conférence invitée**

#### **2004**

30. The principles of microstructural analysis in the transmission electron microscope, **P. Ruterana**, International Workshop on ion beam techniques, Lisbon, 9-10 March 2004, **Conférence invitée**
31. Indium segregation at atomic scale inside InGaN/GaN quantum wells, **P. Ruterana**, International workshop on quantitative techniques in high resolution electron microscopy, Varsovie, 19-23 avril 2004, **Conférence invitée**
32. Convergent beam diffraction characterization of inversion domains and planar loops in GaN, **P. Ruterana**, International Conference on experimental and computing methods in High resolution diffraction applied for structure characterization of modern materials, Zakopane, Poland, June 13-17<sup>th</sup>, 2004, **Conférence invitée**
33. Atomic and electronic structure of the a edge dislocation and grain boundaries in GaN, J. Chen, A. Béré, **P. Ruterana**, and G. Nouet, Interfacial Processes and Properties of Advanced Materials Caen le 28-30 Juin 2004 **Conférence invitée**

#### **2005**

34. Structural investigations by TEM of InN layers grown by MOCVD, **P. Ruterana**, AFOSR Indium Nitride Workshop, 9-13 January 2005 at the Royal Kona Resort in Kailua-Kona, Hawaii, **Conférence Invitée**
35. High temperature annealing of RE implanted GaN films: structural and optical properties, K. Lorenz, U. Wahl, E. Alves, E. Nogales, S. Dalmaso, R. W. Martin, K. P. O'Donnell, T. Wojtowicz, **P. Ruterana**, S. Ruffenach, O. Briot, EMRS Spring meeting, Strasbourg 31/05-03/06, **Conférence invitée**
36. Low and high indium fluctuation in MOCVD grown InGaN/GaN as determined by quantitative HRTEM, **P. Ruterana**, F. Gloux, S. Kret, E.K. Suh, P. Dluzewski, E. Yoon, EMRS fall meeting Varsovie 5-9 septembre 2005, **Conférence invitée**
37. Finite element modelling of nonlinear elastic and piezoelectric properties of InN and InGaN QDs, P. Dluzewski, G. Jurczak, **P. Ruterana**, EMRS fall meeting varsovie 5-9 septembre 2005, **Conférence invitée**
38. High resolution and analytical microscopy of ZnO layers doped with magnetic ions for spintronic applications, **P. Ruterana**, M. Abouzaid, C. Liu and H. Morkoç, International Workshop on advanced spectroscopy techniques. Kazimierz, Poland 29/09-02/10, october 2005, **Conférence invitée**
39. The Influence of growth interruption on the In composition fluctuations in InN/GaN ultra thin quantum wells, **P. Ruterana**, F. Gloux, S.Y. Kwon and E; Yoon, 'Workshop on Nano Crystals for Electronic Device Applications', 11-15 octobre 2005, Hanyang University, Seoul, Korea **Conférence invitée**

#### **2006**

40. The atomic structure, electronic properties and formation mechanisms of crystallographic defects in wurtzite nitrogen based semiconductors, 4th International Congress on Materials Science and Engineering, **P. Ruterana**, CISGM-4, Tlemcen, Algeria, 2 -4th, May 2006, **Conférence invitée**.
41. The structure of Mn doped ZnO layers produced by magnetron sputtering for spintronic applications, French-US Workshop On spintronics and magnetic nanostructures, Saint Pierre de Chartreuse – France, 12-14<sup>th</sup> June 2006, M. Abouzaid, **P. Ruterana**, **Conférence invitée**
42. Ion implantation of RE ions in GaN: damage formation and recovery, XXXV International School on the physics of semiconductors compounds, **P. Ruterana**, Ustron-Jaszowiec, Poland, 17-23rd June 2006, **Conférence invitée**

43. Atomic core structure of 90° bent  $\bar{c}$  – screw threading dislocations in wurtzite GaN, I. Belabbas, J. Chen, **P. Ruterana**, G. Yu and G. Nouet 10th Chinese-Korean Workshop on advanced materials, Huangshan, Chine 20-26 Août 2006, **Conférence invitée**.
44. The use of the Ultrathin AlN cap in protection of the GaN during RE implantation and subsequent annealing, **P. Ruterana**, Florence Gloux, K. Lorenz and E. Alves, Workshop on "Impurity Based Electroluminescent Devices and Materials, (IBEDM 2006), Nankishiharama, Japan 18-22 Oct. 2006, **Conférence Invitée**
45. Manganese behaviour in ZnO layers deposited by magnetron sputtering for spintronic applications, **P. Ruterana**, M. Abouzaid, Workshop on "Impurity Based Electroluminescent Devices and Materials, (IBEDM 2006), Nankishiharama, Japan 18-22 Oct. 2006, **Conférence Invitée**
46. Interfaces et défauts étendus dans les nitrures semiconducteurs G. Nouet, **P. Ruterana**, J. Chen, S. Petit, I. Belabbas, H. Lei, A. Béré, Matériaux 2006, Dijon, 13-16 nov. 2006, **Conférence invitée**
47. Quantitative transmission electron microscopy of indium rich heterostructures (InGaN/GaN), **P. Ruterana**, S. Kret, Third International Workshop on Indium Nitride, November 12–16, 2006, Ilhabela, São Paulo, Brazil, **Conférence invitée**.
48. The structural and optical properties of InN layers grown by RF plasma assisted molecular beam epitaxy, A. Delimitis, Ph. Komninou, Th. Kehagias, J. Arvanitidis, S. Ves, M. Katsikini, E. Dimakis, A. Georgakilas, G. Nouet, **P. Ruterana**, Third International Workshop on Indium Nitride, November 12–16, 2006, Ilhabela, São Paulo, Brazil, **Conférence invitée**.

#### **2008**

49. Extended defects in novel wurtzite semiconductors: high resolution TEM and atomistic modelling, **P. Ruterana**, Extended Defects in Semiconductors 2008, Poitiers 14-19 septembre 2008, **Conférence invitée**
50. Optical Activation of Rare Earths Implanted into III-Nitrides, E. Alves, K. Lorenz, F. Gloux, **P. Ruterana**, A. Braud, R.W. Martin, K.P. O'Donnell, presented at the Symposium D: Rare Earth doping of advanced materials for photonic application, MRS Fall Meeting 1-5 Décembre 2008

#### **2009**

51. Polar and semipolar GaN/AlN nanostructures for optoelectronic applications, E. Monroy, P. K. Kandaswamy, L. Lahourcade, A. Wirthmüller, M. Tchernycheva, F. H. Julien, Th. Kehagias, G. P. Dimitrakopoulos, and Ph. Komninou, **P. Ruterana**, and M. Eickhoff, 25th Panhellenic Conference on Solid State Physics & Materials Science, 20-23 Septembre 2009, Thessaloniki, Grèce, **Conférence invitée**
52. The behaviour of GaN during ion implantation by RE atoms, **P. Ruterana**, IBEMD 2009, 30 Sept-3oct 2009, Tossa de Mar, Spain, **Conférence invitée**
53. Extended crystallographic defects in nitride semiconductors, Y. Arroyo Rojas Dasilva, **Pierre Ruterana**, L. Lahourcade, E. Monroy, G. Nataf, Advanced electron microscopy school and Workshop on nanomaterials, AEM-Nanomat09, 28Sept-2 Oct 2009, Sartillo, Mexico, **Conférence invitée**
54. The perspective developments in InN and In rich alloys, **P. Ruterana**, China International Forum on Solid State Lighting 2009, 14-16oct 2009, Shenzhen, China, **Conférence invitée**

#### **2010**

55. TEM investigations of extended defects and effects in nitride heterostructures, **P. Ruterana**, Y. Arroyo Dasilva, M.P Chauvat, H. Lei, J. Chen, L. Lahourcade and E. Monroy, Photonic West OPTO: Gallium Nitride Materials and Devices V (Conference 7601: Chair H. Morkoç and Cole Litton) 25–28 January 2010, Moscone Center, San Francisco, CA United States, **Conférence invitée**
56. Polar and Semipolar III-Nitrides for long wavelength intersubband devices, E. Monroy, P. K. Kandaswamy, H. Machhadani, A. Wirthmüller, S. Sakr, L. Lahourcade, A. Das, M. Tchernycheva, **P. Ruterana**, and F. H. Julien, Presented in SPIE Photonic West on OPTO: Quantum Sensing and Nanophotonic Devices VII (Conference 7608: Chair M. Razeghi): 24–28 January 2010, Moscone Center, San Francisco, CA United States, **Conférence invitée**
57. Dislocations in III-Nitride semiconductors, J. Chen, H. Lei, I. Balabbas, B. Bendoudou, G. Nouet, **P. Ruterana**, South-West workshop on Advanced Materials 2010 and 2nd China France Workshop on Advanced Materials 03 - 08 October 2010, Toulouse, **Conférence Invitée**
58. S. Albert, J. Grandal, M. A. Sanchez-Garcia, P. Lefebvre, J. Ristic, E. Calleja, A. Vilalta-Clemente, B. Lacroix, **P. Ruterana**, E. Luna, U. Jahn, A. Trampert, "*MBE growth and characterization of InN/InGaN thin films and*

*nanostructures on GaN templates and Si(111) substrates*”, 16<sup>th</sup> International Conference on Molecular Beam Epitaxy, Berlin (Allemagne), 22 août 2010, **Conférence Invitée**

### **2011**

59. Behaviour of wurtite nitride semiconductors during rare earth ion implantation at medium range energy and room temperature, **P. Ruterana**, in Symposium V: Rare-Earth Doping of Advanced Materials for Photonic Applications; at Material Research Society Spring Meeting, 25-29 April 2010, San Francisco, **Conférence Invitée**
60. Structural characterization of InAlN layers for HEMT applications, M. Morales, A.Vilalta-Clemente, **P. Ruterana**, M. A. di Forte-Poisson, P. Gamarra, M. Heuken and C. Giesen, EWMOPE2011; 14th European Workshop on Metalorganic Vapor Phase Epitaxy, 5 – 8th June 2011, Wroclaw, Poland, **Conférence Invitée**
61. Nitride semiconductors for applications in solid state lighting and high efficiency solar cells, **P. Ruterana**, ISAPA, First International Symposium on electrical Arc and thermal Plasma in Africa, 17th – 1rst October, 2011, Ouagadougou, Burkina Faso, **Conférence invitée**,
62. Optoelectronic performance of gallium nitride devices: the role of tilt grain boundaries and point defects, A. Béré, **P. Ruterana**, and J. Koulidiati, ISAPA, First International Symposium on electrical Arc and thermal Plasma in Africa, 17th – 21rst October, 2011, Ouagadougou, Burkina Faso, **Conférence Invitée**

### **2012**

63. TEM Characterization of Ordered and Disordered Semiconductor Alloys, **P. Ruterana**, International Workshop on SMART Energy Harvesting and Saving with III-Nitride Semiconductors, "Frontier of Nitride Semiconductor Alloy Photonics", Hotel Springs Makuhari, Makuhari Messe, 10 -12th May, 2012, Chiba, Japan, **Conférence Invitée**
64. Yb:CaF<sub>2</sub> - a material for the new generation of High Power Lasers, P. Camy, J-L. Doualan, A. Braud, V. Ménard G. Brasse, A. Benayad, B. Lacroix, **P.Ruterana**, R. Moncorgé, F. Druon, P. Georges, S. Ricaud, D.N. Papadopoulos, A. Courjaud, E. Mottay, M. Siebold, LAP 2012, 6th International Conference on Laser Probing, 4-8 June 2012, **Conférence Invitée**
65. III-N heterostructures for infrared optoelectronics: present and perspectives, E. Monroy, M. Beeler, Y. Kotsar, S. Valdueza-Felip, R. Songmuang, S. Sakr, M. Tchernycheva, F. H. Julien, E. Gross, A. Pesach, G. Bahir, M.-P. Chauvat and **P. Ruterana**, 21st European Workshop on Heterostructure Technology. 5-7 November 2012, Barcelona, Spain, **Conférence invitée**

### **2013**

66. Mechanisms of damage formation during rare earth ion implantation in nitride semiconductors, **P. Ruterana**, M.P. Chauvat, B. Lacroix and S. Leclerc, ISPlasma2013, 5th International Symposium on Advanced Plasma Science and its Applications for Nitrides and Nanomaterials, January 28 to February 1, 2013, Nagoya University, Japan, **Conférence invitée**
67. Nanocrystallization of Gallium nitride, its origin and stability, **P. Ruterana**, M.P. Chauvat, F. Gloux and K. Lorenz, the Twenty-first Annual International Conference on Composites/Nano Engineering (ICCE-21) Tenerife, Spain July 21-27, 2013, **Conférence invitée**
68. Strain relaxation mechanisms at the hetero-interface in GaSb/GaAs –GaP layers grown by molecular beam epitaxy, Y. Wang, **P. Ruterana**, J. Chen, S. El Kazzi, L. Desplanque, and X. Wallart, Processus Ultimes d'épitaxie de Semiconducteurs (GDR-CNRS), 1ère réunion plénière, 3-5 Juillet 2013 à Aix-en-Provence, **Conférence invitée**

### **2014**

69. In-rich InGaN alloys grown by MOVPE and MBE for Photovoltaics, **P. Ruterana**, M-P. Chauvat, Magali Morales, S. Valdueza Felip and E. Monroy, Energy Materials Nanotechnology Spring Meeting 2014, 27 Fevrier-2 Mars, Las Vegas, USA, **Conférence invitée**
70. Atomistic modeling and HAADF investigations of misfit and threading dislocations in GaAs/GaSb heterostructures for applications in high electron mobility transistors, **P. Ruterana**, Yi Wang, Jun Chen, S. El Kazzi, L. Deplanque, and X. Wallart, in 10th International Conference of Computational Methods in Sciences and Engineering, 4-7 April, 2014 in Athens, Greece, **Conférence invitée**
71. Advances in InN Material, Alloys and Heterostructures for Photovoltaic Applications, **P. Ruterana**, in 3rd Annual World Congress of Advanced Materials-2014 (WCAM-2014), Symposium “Dream of Ubiquitous Smartness”, June 6-9, 2014, Chongqing, China, **Conférence invitée**
72. Rare earth ion implantation and optical activation in nitride semiconductors for multicolor emission, **P. Ruterana**, M.P. Chauvat, and K. Lorenz, Sixth International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA), Sunday 27th July - Friday 1st August 2014 in Leeds, UK, **Conférence invitée**

73 Combined topological analysis, atomistic modelling and HRTEM of grain boundaries in wurtzite materials, **P. Ruterana**, E-MRS Fall Meeting, September 15-19, 2014, Warsaw University of Technology, Poland, Symposium N: Crystallography in materials science, Novel methods for novel materials, **Conférence invitée**

74. The atomic structure and properties of dislocations in ZnO nanostructures, **P. Ruterana**, M.P. Chauvat, J. Chen, B. Ben Doudou, Energy Materials and Nanotechnology Meeting, 22-25 Sept., 2014, Chengdu China, **Conférence invitée**

### **2015**

75. The structure of ternary Nitride Semiconductors (InGaN, InAlN) for tandem solar cells, **P. Ruterana**, M.P. Chauvat, H. Ben Ammar, S. Valdueza-Felip, and E. Monroy, Energy Materials and Nanotechnology Meeting, 12-15 Janvier 2015, Orlando, USA, **Conférence invitée**

76. Materials challenges in nitride semiconductors alloys for high power and frequency, **P. Ruterana**, in 4rd Annual World Congress of Advanced Materials-2015 (WCAM-2015), Symposium Optical, Electronic and Magnetic Materials, April 18-20, 2015, Shenzhen, **Conférence invitée**

77. Nitride semiconductors alloys and growth issues for high performance light emitting and detection devices, **P. Ruterana**, 24-27 April 2015 Energy Materials and Nanotechnology Beijing, **Conférence invitée**

78. Hydrogen effect on the growth of Indium rich nitride layers in MOVPE: a detailed TEM study, S.Kret, R. Czernecki, E. Grzanka, F. Ivaldi, P.Dłuzewski, **P. Ruterana**, M.Lesczynski, 24-27 April 2015 Energy Materials and Nanotechnology Beijing, **Conférence invitée**

## **II.3 Contribution à des ouvrages scientifiques**

1. Catalyst characterisation and in situ FTIR studies of carbon dioxide methanation over ruthenium supported on titania. G.J. Highfield, **P. Ruterana**, K.R. Thampi, M. Graetzel in Structure and reactivity of surfaces, C. Morterra, A. Zecchina and G. Costa editors, Elsevier **1989** p. 819-860

2. Cleaving samples for TEM observation, **P. Ruterana** in Procedures in Electron Microscopy edition **1998**, Chapter 7. Specialized Specimen-Dependent Techniques for TEM, paragraph 7.2.3, John Wiley&Sons Ltd England, Dr; A.J. Wilson editor

3. Extended defects and low dimensional nitrides layers, **P. Ruterana** In Low dimensional Nitride Semiconductors, B. Gil, editor , Oxford University Press, **2002**, p.151-190

4. Extended Defects in Wurtzite GaN Layers: Atomic Structure, Formation and Interaction Mechanisms **P. Ruterana**, A. M. Sánchez and G. Nouet, Nitride Semiconductors: Handbook on Materials and Devices, Wiley VCH **2003**, Weinheim, ISBN 3-527-40387-6, P. Ruterana, M. Albrecht and J. Neugebauer Eds, p. 379-438

5. Strain, chemical composition and defects analysis at atomic level in GaN based epitaxial layers. S. Kret, **P. Ruterana**, C. Delamarre, T. Benabbas, P. Dłuzewski Nitride Semiconductors: Handbook on Materials and Devices, Wiley VCH **2003**, Weinheim, ISBN 3-527-40387-6, P. Ruterana, M. Albrecht and J. Neugebauer Eds, p. 439-488

6. RE implantation and annealing of III-Nitrides, K. Lorenz, E. Alves, F. Gloux, **P. Ruterana**, in Rare earth doped III-nitrides for optoelectronic and spintronic applications, K.P. O. Donnell and V. Dierolf editors, Published Springer-Verlag Berlin, Heidelberg Platz 3, D-14197 Berlin, Germany; ISSN: 0303-4216, Book series: Topics in Applied Physics Volume **124** Pages: 25-54 (2010)

## **II.4 Edition d'ouvrages scientifiques**

1. Interface and defects at atomic level, special issue of Physica Status Solidi (b) vol **227**, N°1, (2001) **P. Ruterana**, C. Humphreys and T. Karakostas, Guest editors.
2. 'Nitride Semiconductors : Handbook on Materials and Devices' **P. Ruterana**, M. Albrecht, and J. Neugebauer eds, isbn 3-527-40387-6, Wiley VCH Berlin 2003
3. Rare Earth doped materials for photonics, special issue of Material Science and Engineering B **105**, 2003, **P. Ruterana**, Guest editor
4. Indium nitride and indium rich related alloys, special issue of Physica status solidi (a), Vol. **203** N °1, 2005, **P. Ruterana**, guest editor
5. Rare earth doped photonic materials, special issue of Optical Materials Vol **28** N°6-7, 2006, **P. Ruterana**, guest editor

6. Interfacial Processes and properties of advanced materials, special issue of Phil Mag, **86**, N°15, 2006, P. Bristowe, **P. Ruterana**, guest editors
7. Dilute magnetic materials for spintronic applications, special issue of Phys. stat. sol. (a) **204**, N° 1, (2007), **P. Ruterana**, guest editor
8. Novel Semiconductor Materials for Room-Temperature Ferromagnetism, edited by C.R. Abernathy, S. Bedair, **P. Ruterana**, and R. Frazier; Mater. Res. Soc. Symp. Proc. **Volume 999E**, Warrendale, PA, (2007)
9. Rare earth doping of photonic materials: Mechanisms and devices, special issue of Materials Science and Engineering B **146**, N°1-3, (2008), J. Evans-Freeman, P. Goldman, T. Kimura and **P. Ruterana**, guest editors
10. Rare earth doped materials for photonics: Proceeding of MRS Fall meeting, Symposium D, Boston 1-5 Décembre 2008, V. Dierolf, Y. Fujiwara, **P. Ruterana** and J.M. Zavada, editors, Vol **1111** (2009)
11. Indium nitride and related alloys, Physica Status Solidi **A209**, N°1 (2012), Proceedings of E-MRS ICAM IUMRS 2011 Spring meeting, Nice France 9-13 May 2011, Symposium H, **P. Ruterana**, Guest Editor

## II.5 Actes de Congrès Publiés avec comité de lecture

### 1983

1. Transient annealing of implanted silicon: microscopic analysis and comparison with electrical characteristics, M.C. Boissy, P. Ruterana, G. Nouet, Inst. Phys Conf. Ser. 1983, **67**, 179

### 1986

2. High resolution TEM study of the Si<sub>3</sub>N<sub>4</sub>/GaAs interface produced by multipolar plasma deposition, P. Ruterana, J. Schneider, J.P. Chevalier, P. Friedel, J. Microsc. Spectrosc. Electron. 1986, **11**, 43a

### 1987

3. C.W. multilayers for soft X-rays optics. Fabrication using in situ kinetic ellipsometry, V. Bodart, Ph. Houdy, J.P. Hily, P. Ruterana, Proc. Int. Symp. on trends and new applications in thin films, 1987, **1**, 15
4. Cleaning and nitridation of (100) GaAs surfaces: a high resolution electron microscopy study, P. Ruterana, J.P. Chevalier, P. Friedel, J. Schneider, Inst. Phys. Conf. Ser. 1987, **87**, 27

### 1988

5. Dispersion of small Pt particles deposited by DC sputtering on TiO<sub>2</sub> support, P. Ruterana, J. Microsc. Spectrosc. Electron. 1988, **13**, 67a
6. A TEM study of the Ru-RuO<sub>x</sub>/TiO<sub>2</sub> catalyst for methanation of CO<sub>2</sub> at room temperature and atmospheric pressure, P. Ruterana, P.A. Buffat, K.R. Thampi, Int. Phys. Conf. Ser. 1988, **93-2**, 287

### 1989

7. Selective dispersion of the Ru-RuO<sub>x</sub>/TiO<sub>2</sub> catalyst for methanation of CO<sub>2</sub>, P. Ruterana, P.A. Buffat, K.R. Thampi, M. Graetzl, Mat. Res. Symp. Proc. 1989, **139**, 327
8. The structure of ultrathin metallic layers for ohmic and Schottky contacts in GaAs and silicon devices, P. Ruterana, P.A. Buffat, Int. Phys. Conf. Ser. 1989, **100**, 677
9. High resolution electron microscopy of ion implanted and annealed silicon, P. Ruterana, P. Stadelmann, P.A. Buffat, Int. Phys. Conf. Ser. 1989, **100**, 39
10. A structure analysis of the Na<sub>2</sub>MoO<sub>4</sub> catalyst for water free dehydrogenation of methanol to formaldehyde, P. Ruterana, M. Prairie, S. Su, J. Microsc. Spectrosc. Electron. 1989, **14**, 64a
11. A HREM and STEM study of the genesis of PdFe bimetallic catalyst, M. Roch, J.P. Boitiaux, J. Lynch, R. Szymanski, P. Ruterana, P.A. Buffat, J. Microsc. Spectrosc. Electron. 1989, **14**, 43a
12. Alternative techniques for TEM sample preparation: Application to catalyst and to metallurgical interfaces, P. Ruterana, J. Microsc. Spectrosc. Electron. 1989, **14**, 70a

### 1990

13. Ultramicrotomy and wedge cleaving as alternative TEM sample preparation methods in materials science, P. Ruterana, D. Laub, P.A. Buffat, Mater. Res. Soc. Symp. Proc. 1990, **199**, 263
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## II.7 Séminaires invitées (S)



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12. Perfectionnement à la microscopie électronique haute résolution, P. Ruterana, Université de Barcelone, 5 novembre 1995
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