

## Bruno GAYRAL

### Liste de publications/brevets (Octobre 2016)

#### Brevets (4) :

T. Yamate, S. Vannuffelen, **B. Gayral**, S. S. Chee and C. Wilson, Brevet WO 2006/070239 “[Method and apparatus for electro-optical hybrid telemetry](#)”

S. Vannuffelen, T. Yamate, **B. Gayral**, S. S. Chee and C. Wilson, Brevet WO 2006/067578 “[Methods and apparatus for single fiber optical telemetry](#)”

**B. Gayral**, S. Vannuffelen and B. Théron, Brevet WO 2005/078413 “[Method for performing composition analysis of a natural gas sample](#)”

J.-M. Gérard, **B. Gayral** and Le Si Dang. Brevet WO 01/93384 “[Single photon source based on transmitters with selectively distributed frequencies](#)”

#### Monographie (1) :

**B. Gayral**, “[Controlling spontaneous emission dynamics in semiconductor microcavities : an experimental approach](#)”, *Ann. Phys. Fr.*, vol. **26**, N. 2 (2001).

#### Revue à comité de lecture (61) :

#### 2016

- I. Roland, M. Gromovyi, Y. Zeng, M. El Kurdi, S. Sauvage, C. Brimont, T. Guillet, B. Gayral, F. Semond, J. Y. Duboz, M. de Micheli, X. Checoury and P. Boucaud, “[Phase-matched second harmonic generation with on-chip GaN-on-Si microdisks](#)”, *Sci. Rep.* vol. **6**, 34191 (2016)
- Y. Zeng, I. Roland, X. Checoury, Z. Han, M. El Kurdi, S. Sauvage, **B. Gayral**, C. Brimont, T. Guillet, F. Semond and P. Boucaud, “[Imaging of photonic crystal localized modes through third-harmonic generation](#)”, *ACS Phot.* vol. **3**, 1240 (2016)
- S. Meuret, L. H. G. Tizei, T. Auzelle, R. Songmuang, B. Daudin, **B. Gayral** and M. Kociak, “[Lifetime measurements well below the optical diffraction limit](#)”, *ACS Phot.* vol. **3**, 1157 (2016)
- G. Avit, Y. André, C. Bougerol, D. Castelluci, A. Dussaigne, P. Ferret, S. Gaugiran, **B. Gayral**, E. Gil, Y. Lee, M. Reda Ramdani, E. Roche and A. Trassoudaine, “[GaN Rods Grown on Si by SAG-HVPE toward GaN HVPE/InGaN MOVPE Core/Shell Structures](#)”, *Cryst. Growth. Des.* vol. **16**, 2509, (2016)
- I. Roland, Y. Zeng, X. Checoury, M. El Kurdi, S. Sauvage, C. Brimont, T. Guillet, **B. Gayral**, M. Gromovyi, J.-Y. Duboz, F. Semond, M. P. de Micheli and P. Boucaud, “[Near-infrared III-nitride-on-silicon nanophotonic platform with microdisk resonators](#)”, *Opt. Express* vol. **24**, 9602 (2016)
- X. Zhang, H. Lourenço-Martins, S. Meuret, M. Kociak, B. Haas, J.L. Rouvière, P.H. Jouneau, C. Bougerol, T. Auzelle, D. Jalabert, X. Biquard, **B. Gayral** and B. Daudin, “[InGaN nanowires with high InN molar fraction: growth, structural and optical properties](#)”, *Nanotechnology* vol. **27**, 195704 (2016)
- J. Sellés, C. Brimont, G. Cassabois, P. Valvin, T. Guillet, I. Roland, Y. Zeng, X. Checoury, P. Boucaud, M. Mexis, F. Semond and **B. Gayral**, “[Deep-UV nitride-on-silicon microdisk lasers](#)”, *Sci. Rep.* vol. **6**, 21650 (2016)
- M. Belloeil, **B. Gayral** and B. Daudin, “[Quantum Dot-Like behavior of compositional fluctuations in AlGaIn nanowires](#)”, *Nano Letters* vol. **16**, 960 (2016)

## 2015

- T. Auzelle, B. Haas, M. Den Hertog, J.L. Rouvière, B. Daudin and **B. Gayral**, "Attribution of the 3.45 eV GaN nanowires luminescence to inversion domain boundaries", *Appl. Phys. Lett.* Vol. **107**, 051904 (2015)
- Y. Zeng, I. Roland, X. Checoury, Z. Han, M. El Kurdi, S. Sauvage, **B. Gayral**, C. Brimont, T. Guillet, M. Mexis, F. Semond and P. Boucaud, "Resonant second harmonic generation in a gallium nitride two-dimensional photonic crystal on silicon", *Appl. Phys. Lett.* vol. **106**, 081105 (2015)

## 2014

- I. Roland, Y. Zeng, Z. Han, X. Checoury, C. Blin, M. El Kurdi, A. Ghrib, S. Sauvage, **B. Gayral**, C. Brimont, T. Guillet, F. Semond and P. Boucaud, "Near-infrared gallium nitride two-dimensional photonic crystal platform on silicon", *Appl. Phys. Lett.* vol. **105**, 011104 (2014)
- G. Nogues, T. Auzelle, M. den Hertog, **B. Gayral** and B. Daudin, "Cathodoluminescence of stacking fault bound excitons for local probing of the exciton diffusion length in single GaN nanowires", *Appl. Phys. Lett.* vol. **104**, 102102 (2014)
- D. Néel, I. Roland, X. Checoury, M. El Kurdi, S. Sauvage, C. Brimont, T. Guillet, **B. Gayral**, F. Semond and P. Boucaud, "Aluminum nitride photonic crystals and microdiscs for ultra-violet nanophotonics", *Adv. Nat. Sci.: Nanosci. Nanotechnol.* vol. **5**, 023001 (2014)

## 2013

- C. Brimont, T. Guillet, S. Rousset, D. Néel, X. Checoury, S. David, P. Boucaud, D. Sam-Giao, **B. Gayral**, M. J. Rashid and F. Semond, "Imaging of photonic modes in an AlN-based photonic crystal probed by an ultra-violet internal light source", *Opt. Lett.* vol. **38**, 5059 (2013)
- A. Pierret, C. Bougerol, M. den Hertog, **B. Gayral**, M. Kociak, H. Renevier and B. Daudin, "Structural and optical properties of Al<sub>x</sub>Ga<sub>1-x</sub>N nanowires", *Phys. Status Solidi-Rapid Res. Lett.* vol. **7**, 868 (2013)
- A. Pierret, C. Bougerol, **B. Gayral**, M. Kociak and B. Daudin, "Probing alloy composition gradient and nanometer-scale carrier localization in single AlGaN nanowires by nanocathodoluminescence", *Nanotechnology* vol. **24**, 305703 (2013)
- A. Pierret, C. Bougerol, S. Murcia-Mascaros, A. Cros, H. Renevier, **B. Gayral** and B. Daudin, "Growth, structural and optical properties of AlGaN nanowires in the whole composition range", *Nanotechnology* vol. **24**, 115704 (2013)
- D. Sam-Giao, R. Mata, G. Tourbot, J. Renard, A. Wyszomolek, B. Daudin and **B. Gayral**, "Fine optical spectroscopy of the 3.45 eV emission line in GaN nanowires", *J. Appl. Phys.* vol. **113**, 043102 (2013)
- C. Leclere, V. Fellmann, C. Bougerol, D. Cooper, **B. Gayral**, M. G. Proietti, H. Renevier and B. Daudin, "Strain assisted inter-diffusion in GaN/AlN quantum dots", *J. Appl. Phys.* vol. **113**, 034311 (2013)

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- D. Sam-Giao, D. Néel, S. Sergent, **B. Gayral**, M. J. Rashid, F. Semond, J. Y. Duboz, M. Mexis, T. Guillet, C. Brimont, S. David, X. Checoury and P. Boucaud, "High quality factor AlN nanocavities embedded in a photonic crystal waveguide", *Appl. Phys. Lett.*, vol. **100**, 191104 (2012)
- G. Tourbot, C. Bougerol, F. Glas, L.F. Zagonel, Z. Mahfoud, S. Meuret, P. Gilet, M. Kociak, **B. Gayral** and B. Daudin, "Growth mechanism and properties of InGaN insertions in GaN nanowires", *Nanotechnology*, vol. **23**, 135703 (2012)

## 2011

- X. J. Chen, B. Gayral, D. Sam-Giao, C. Bougerol, C. Durand and J. Eymery, “Catalyst-free growth of high-optical quality GaN nanowires by metal-organic vapor phase epitaxy”, *Appl. Phys. Lett.*, vol. **99**, 251910 (2011)
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- A.-L. Bavencove, G. Tourbot, J. Garcia, Y. Désières, P. Gilet, F. Levy, B. André, **B. Gayral**, B. Daudin and Le Si Dang, “Submicrometre resolved optical characterization of green nanowire-based light emitting diodes”, *Nanotechnology*, vol. **22**, 345705 (2011)
- D. Néel, S. Sergent, M. Mexis, D. Sam-Giao, T. Guillet, C. Brimont, T. Bretagnon, F. Semond, **B. Gayral**, S. David, X. Checoury and P. Boucaud, “AlN photonic crystal nanocavities realized by epitaxial conformal growth on nanopatterned silicon substrate”, *Appl. Phys. Lett.*, vol. **98**, 261106 (2011)
- V. Fellmann, P. Jaffrennou, D. Sam-Giao, **B. Gayral**, K. Lorenz, E. Alves and B. Daudin, “Ternary AlGaIn alloys with high Al content and enhanced compositional homogeneity grown by plasma-assisted molecular beam epitaxy”, *Jpn. J. Appl. Phys.*, vol. **50**, 031001 (2011)
- G. Tourbot, C. Bougerol, A. Grenier, M. Den Hertog, D. Sam-Giao, D. Cooper, P. Gilet, **B. Gayral** and B. Daudin, “Structural and optical properties of InGaIn/GaN nanowire heterostructures grown by PA-MBE”, *Nanotechnology* vol. **22**, 075601 (2011)

## 2010

- R. Mata, A. Cros, J. A. Budagosky, A. Molina-Sánchez, N. Garro, A. García-Cristóbal, J. Renard, S. Founta, **B. Gayral**, E. Bellet-Amalric, C. Bougerol, and B. Daudin, “Reversed polarized emission in highly strained a-plane GaN/AlN multiple quantum wells”, *Phys. Rev. B* vol. **82**, 125405 (2010)
- J. Renard, G. Tourbot, D. Sam-Giao, C. Bougerol, B. Daudin and **B. Gayral**, “Optical spectroscopy of cubic GaN nanowires”, *Appl. Phys. Lett.*, vol. **97**, 081910 (2010)
- A. Das, S. Magalhaes, Y. Kotsar, P. K. Kandaswamy, **B. Gayral**, K. Lorenz, E. Alves, P. Ruterana and E. Monroy, “Indium kinetics during the plasma-assisted molecular beam epitaxy of semipolar (11-22) InGaIn layers”, *Appl. Phys. Lett.*, vol. **96**, 181907 (2010)

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- A.-L. Henneghien, **B. Gayral**, Y. Désières and J.-M. Gérard, “Simulation of waveguiding and emitting properties of semiconductor nanowires with hexagonal or circular sections”, *J. Opt. Soc. Am. B*, vol. **26**, 2396 (2009)
- J. Renard, R. Songmuang, G. Tourbot, C. Bougerol, B. Daudin and **B. Gayral**, “Evidence for quantum-confined Stark effect in GaN/AlN quantum dots in nanowires”, *Phys. Rev. B*, vol. **80**, 121305(R) (2009)
- J. Renard, P. K. Kandaswami, E. Monroy and **B. Gayral**, “Suppression of nonradiative processes in long-lived polar GaN/AlN quantum dots”, *Appl. Phys. Lett.*, vol. **95**, 131903 (2009)
- B. Amstatt, J. Renard, C. Bougerol, E. Bellet-Amalric, **B. Gayral** and B. Daudin, “Quantum dot to quantum wire transition of *m*-plane GaN islands” *Phys. Rev. B*, vol. **79**, 035313 (2009)

## 2008

- **B. Gayral** and J.-M. Gérard, "Photoluminescence experiment on quantum dots embedded in a large Purcell-factor microcavity" *Phys. Rev. B*, vol. **78**, 235306 (2008)
- J. Renard, B. Amstatt, C. Bougerol, E. Bellet-Amalric, B. Daudin and **B. Gayral** "Optical properties of m-plane GaN quantum dots and quantum wires" *J. Appl. Phys.* vol. **104**, 103528 (2008)
- L. Lahourcade, P. K. Kandaswamy, J. Renard, P. Ruterana, H. Machhadani, M. Tchernycheva, F. H. Julien, **B. Gayral** and E. Monroy "Interband and intersubband optical characterization of semipolar (11-22)-oriented GaN/AlN multiple-quantum-well structures" *Appl. Phys. Lett.*, vol. **93**, 111906 (2008)
- J. Renard, R. Songmuang, C. Bougerol, B. Daudin and **B. Gayral** "Exciton and biexciton luminescence from single GaN/AlN quantum dots in nanowires" *Nano Letters*, vol. **8**, 2092 (2008)
- L. Lahourcade, J. Renard, **B. Gayral**, E. Monroy, M. P. Chauvat and P. Ruterana "Ga kinetics in plasma-assisted molecular-beam epitaxy of GaN(11-22): Effect on the structural and optical properties" *J. Appl. Phys.*, vol. **103**, 093514 (2008)
- C. Czekalla, J. Guinard, C. Hanisch, B. Q. Cao, E. M. Kaidashev, N. Boukos, A. Travlos, J. Renard, **B. Gayral**, D. Le Si Dang, M. Lorenz and M. Grundmann "Spatial fluctuations of optical emission from single ZnO/MgZnO nanowire quantum wells" *Nanotechnology*, vol. **19**, 115202 (2008)

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- I. C. Robin, B. Gauron, P. Ferret, C. Tavares, G. Feuillet, Le Si Dang, **B. Gayral** and J.-M. Gérard "Evidence for low density of nonradiative defects in ZnO nanowires grown by metal organic vapor-phase epitaxy" *Appl. Phys. Lett.*, vol. **91**, 143120 (2007)
- B. Amstatt, J. Renard, C. Bougerol, E. Bellet-Amalric, **B. Gayral** and B. Daudin "Growth of m-plane GaN quantum wires and quantum dots on m-plane 6H-SiC" *J. Appl. Phys.*, vol. **102**, 074913 (2007)
- M. Tchernycheva, C. Sartel, G. Cirlin, L. Travers, G. Patriarche, J.-C. Harmand, Le Si Dang, J. Renard, **B. Gayral**, L. Nevou and F. Julien "Growth of GaN free-standing nanowires by plasma-assisted molecular beam epitaxy: structural and optical characterization" *Nanotechnology*, vol. **18**, 385306 (2007)
- F. Rol, S. Founta, H. Mariette, B. Daudin, Le Si Dang, J. Bleuse, D. Peyrade, J.-M. Gérard and **B. Gayral** "Probing exciton localization in nonpolar GaN/AlN quantum dots by single-dot optical spectroscopy" *Phys. Rev. B*, vol. **75** 125306 (2007)

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- T. Andreev, N. Q. Liem, Y. Hori, M. Tanaka, O. Oda, D. Le Si Dang, B. Daudin and **B. Gayral** "Optical study of excitation and deexcitation of Tm in GaN quantum dots" *Phys. Rev. B*, vol. **74**, 155310 (2006)
- E. Monroy, F. Guillot, **B. Gayral**, E. Bellet-Amalric, D. Jalabert, J.-M. Gérard, L. S. Dang, M. Tchernycheva and F. H. Julien, "Observation of hot luminescence and slow inter-sub-band relaxation in Si-doped GaN/Al<sub>x</sub>Ga<sub>1-x</sub>N (x=0.11, 0.25) multi-quantum-well structures" *J. Appl. Phys.*, vol. **99**, 093513 (2006)

## 2005

- T. Andreev, E. Monroy, **B. Gayral**, B. Daudin, N. Q. Liem, Y. Hori, M. Tanaka, O. Oda and D. Le Si Dang. "Eu locations in Eu-doped InGaN/GaN quantum dots" *Appl. Phys. Lett.*, vol. **87**, 021906 (2005)
- S. Founta, F. Rol, E. Bellet-Amalric, J. Bleuse, B. Daudin, **B. Gayral**, H. Mariette and C. Moisson. "Optical properties of GaN quantum dots grown on nonpolar (11-20) SiC by molecular-beam epitaxy" *Appl. Phys. Lett.*, vol. **86** 171901 (2005)

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- **B. Gayral** and J.-M. Gérard, Comment on "Single-mode spontaneous emission from a single quantum dot in a three-dimensional microcavity", *Phys. Rev. Lett.*, vol. **90**, 229701 (2003)
- A. Kiraz, C. Reese, **B. Gayral**, Lidong Zhang, W. V. Schoenfeld, B. D. Gerardot, P. M. Petroff, E. L. Hu, and A. Imamoglu, "Cavity-QED with quantum dots", *J. Opt. B: Quantum Semiclassical Opt.*, vol. **5**, 129 (2003)

## 2002

- A. Kiraz, S. Fälth, C. Becher, **B. Gayral**, Lidong Zhang, E. Hu, W.V. Schoenfeld, P.M. Petroff, and A. Imamoglu, "Photon correlation spectroscopy of a single quantum dot", *Phys. Rev. B*, vol. **65**, 161303(R) (2002)
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- C. Constantin, E. Martinet, D. Y. Oberli, E. Kapon, **B. Gayral** and J.-M. Gérard, "Quantum wires in multidimensional microcavities: effects of photon dimensionality on emission properties", *Phys. Rev. B*, vol. **66**, 165306 (2002)

## 2001

- A. Kiraz, P. Michler, C. Becher, **B. Gayral**, A. Imamoglu, Lidong Zhang, E. Hu, W. V. Schoenfeld and P. M. Petroff, "Cavity-quantum electrodynamics using a single InAs quantum dot in a microdisk structure", *Appl. Phys. Lett.*, vol. **78**, 3932 (2001)
- C. Reese, **B. Gayral**, B. D. Gerardot, A. Imamoglu, P. M. Petroff and E. Hu, "High-Q photonic crystal microcavities fabricated in a thin GaAs membrane", *J. Vac. Sci. Technol. B*, vol. **19**, 2749 (2001)
- H. Rigneault, J. Broudic, **B. Gayral** and J.-M. Gérard "Far-field radiation from quantum boxes located in pillar microcavities", *Opt. Lett.*, vol. **26**, 1595 (2001)
- **B. Gayral**, J.-M Gérard, B. Sermage, A. Lemaître and C. Dupuis, "Time-resolved probing of the Purcell effect for InAs quantum boxes in GaAs microdisks", *Appl. Phys. Lett.*, vol. **78**, 2828 (2001)

## 2000

- M. Schneider, J. Gierak, J.-Y. Marzin, **B. Gayral** and J.-M. Gérard, "Focused ion beam patterning of III-V crystals at low temperature: A method for improving the ion-induced defect localization", *J. Vac. Sci. Technol. B*, vol. **18**, 3162 (2000)

## 1999

- J.-M. Gérard and **B. Gayral**, "Strong Purcell effect for InAs quantum boxes in three-dimensional solid-state microcavities", *IEEE J. of Lightwave Tech.*, vol. **17**, 2089 (1999)
- **B. Gayral**, J.-M. Gérard, A. Lemaître, C. Dupuis, L. Manin and J.-L. Pelouard, "High-Q wet-etched GaAs microdisks containing InAs quantum boxes", *Appl. Phys. Lett.*, vol. **75**, 1908 (1999)

## 1998

- J.-M. Gérard, B. Sermage, **B. Gayral**, B. Legrand, E. Costard and V. Thierry-Mieg, "Enhanced spontaneous emission by quantum boxes in a monolithic optical microcavity", *Phys. Rev. Lett.*, vol. **81**, 1110 (1998)
- **B. Gayral**, J.-M. Gérard, B. Legrand, E. Costard and V. Thierry-Mieg, "Optical study of GaAs/AIAs pillar microcavities with elliptical cross section", *Appl. Phys. Lett.*, vol. **72**, 1421 (1998)

## Communications

### Communications orales invitées (15)

- Séminaire annuel SFP (Société Française de Physique), Orléans, France, Décembre 2014  
"Le prix Nobel pour les LEDs bleues pourquoi ?"
- GDR Nanofils, Porquerolles, France, Octobre 2011  
"Photoluminescence spectroscopy of MBE-grown GaN nanowires"
- Quantum Dot France 2011 (**QD2011**), Toulouse, Juin 2011  
"Optical properties and applications of III-N nanowires"
- International Conference on Superlattices Nanostructures and Nanodevices (**ICSNN 2010**), Beijing, China, Juillet 2010  
"Optical spectroscopy of III-N nanowires"
- **Photonics West 2010** San Francisco, Etats-Unis, Janvier 2010  
"GaN/AlN quantum dots in nanowires : optical properties"
- **E-MRS Spring Meeting 2008** Strasbourg, Mai 2008  
"Photoluminescence spectroscopy of single non-polar GaN/AlN Stranski-Krastanow quantum dots and single polar GaN/AlN quantum dots in nanowires"
- 15<sup>th</sup> International Workshop on Heterostructure Technology (**HETECH 06**) Manchester, Royaume-Uni, Octobre 2006  
"Single dot and time-resolved photoluminescence spectroscopy on non-polar GaN/AlN quantum dots"
- European Workshop on III-Nitride Semiconductor Materials and Devices (**EW3NS**) Heraklion, Grèce, Septembre 2006  
"Single dot and time-resolved photoluminescence spectroscopy on non-polar GaN/AlN quantum dots"
- **MRS Fall Meeting 2005** Boston, USA, novembre 2005  
"QDs in optical microcavities : novel basic effects and application prospects"
- 4<sup>th</sup> international conference on tunable laser diode spectroscopy (**TDLS 2003**), Zermatt, Suisse, Juillet 2003  
"The Use of TDLS for Gas Mixture Analysis and its Application to the Methane-Ethane System"
- International Conference on Superlattices Nanostructures and Nanodevices (**ICSNN 2002**), Toulouse, Juillet 2002  
"Quantum optical phenomena in semiconductor quantum dots"
- 10<sup>th</sup> international conference on Modulated Semiconductor Structures (**MSS10**), Linz, Autriche, Juillet 2001  
"Cavity quantum electrodynamics experiments with InAs quantum dots"
- Quantum interference and cryptographic keys: novel physics and advancing technologies (**QUICK**), Cargèse, Corse, Avril 2001.  
"A Single Quantum Dot Single Photon Turnstile Device"
- Assemblée générale de la **Société Française de Physique**, Paris, Février 2001.  
"Modification de l'émission spontanée de boîtes quantiques semi-conductrices dans des microcavités optiques"
- IEEE Lasers and Electro-Optics Society 1999 annual meeting (**LEOS 99**), San Francisco, Etats-Unis, Novembre 1999  
"Cavity-QED experiments on InAs quantum boxes in micropillars and microdisks"

## Communications orales (14)

- 6th International Symposium on Growth of III-Nitrides (ISGN6), Hamamatsu, Japon, Novembre 2015  
"Attribution of the 3.45 eV luminescence line in GaN nanowires to inversion domain boundary bound excitons"
- 6th International Symposium on Growth of III-Nitrides (ISGN6), Hamamatsu, Japon, Novembre 2015  
"Efficient room temperature deep UV luminescence from thin GaN/AlN QWs grown on silicon by NH<sub>3</sub>-MBE"
- 6th International Symposium on Growth of III-Nitrides (ISGN6), Hamamatsu, Japon, Novembre 2015  
"In<sub>x</sub>Ga<sub>1-x</sub>N Nanowires grown by molecular beam epitaxy: morphology, composition and optical properties control"
- 11th International Conference on Nitride Semiconductors (**ICNS11**), Beijing, Chine, Août 2015  
"Room temperature 275 nm lasing of microdisks based on GaN/AlN quantum wells grown on Si"
- Quantum Dots 2010, Nottingham, Royaume-Uni, Avril 2010  
"GaN/AlN quantum dots in nanowires : optical properties"
- Photonics West 2010 San Francisco, Etats-Unis, Janvier 2010  
"Purely radiative recombination up to room temperature in GaN/AlN QDs with microsecond decay times"
- International Conference on the Physics of Semiconductors (**ICPS 2008**), Rio de Janeiro, Brésil, Août 2008  
"Exciton and biexciton photoluminescence stemming from single GaN/AlN quantum dots in nanowires"
- International Conference on the Physics of Semiconductors (**ICPS 2008**), Rio de Janeiro, Brésil, Août 2008  
"Peculiarities of the Q factor measurement for a high Purcell factor microcavity containing quantum dots"
- International Conference on Superlattices, Nano-structures and Nano-devices (**ICSNN 2006**), Istanbul, Turquie, Août 2006  
"Photoluminescence study of single GaN/AlN quantum dots grown along a non-polar axis"
- 6th International Conference on Nitride Semiconductors (**ICNS6**), Bremen, Allemagne, Août 2005  
"Optical properties of non-polar single GaN quantum dots"
- Quantum electronics and laser science conference (**QELS 2002**), Long Beach, Etats-Unis, Mai 2002  
"Cross-correlation spectroscopy in a single quantum dot"
- Groupement de travail européen **COST 268**, Heraklion, Grèce, Octobre 1999  
"Quantum boxes in microcavities : state of the art, potential applications"
- 9th international conference on Modulated Semiconductor Structures (**MSS9**), Fukuoka, Japon, Juillet 1999  
"Strong Purcell effect for InAs quantum boxes in high-Q wet-etched microdisks"
- International Conference on Superlattice Microstructures and Microdevices (**ICSMM-11**), Hurgada, Egypte, Juillet 1998  
"Experimental evidence of spontaneous emission enhancement for quantum boxes in pillar microcavities"

## Enseignement

- Master 2 Ingénierie des Matériaux et Nanosciences, novembre 2015-février 2016  
12h00 de cours intitulé "Optique des semiconducteurs"
- Ganex school, Nice, juin 2015  
1h30 de cours intitulé "Nanophotonics and quantum optics"

- Master 2 Ingénierie des Matériaux et Nanosciences, janvier-février 2015  
12h00 de cours intitulé “[Optique des semiconducteurs](#)”
- Master 2 Ingénierie des Matériaux et Nanosciences, janvier-février 2014  
12h00 de cours intitulé “[Optique des semiconducteurs](#)”
- Ganex school, La Grande Motte, juin 2013  
2h00 de cours intitulé “[Nanophotonics and quantum optics](#)”
- Prominas, Grenoble course, septembre 2009  
3h00 de cours intitulé “[Optical characterization of semiconductor nanostructures](#)”
- “Son et lumière” school Cargèse, octobre 2006  
2h30 de cours intitulé “[Optical microcavities in semiconductor physics](#)”
- Nanophotonics school , Cargèse, avril 2004  
4h30 de cours intitulé “[Microcavities and Quantum Dots](#)”