

# Short Resume Dr. Ibrahim ALGHORAIBI

Birth Date: 01 January 1975

Nationality: Syrian

Address: Baramkeh, Damascus university

Tel. N°: (+963) 992678268 (mobile)

E-mail: [ibrahim.alghoraibi@gmail.com](mailto:ibrahim.alghoraibi@gmail.com)



ibrahim.alghoraibi@



**Key-Words:** Nano-Physics, Nano-biotechnology, Nanostructure, Epitaxy, III-V Nano-Semiconductors lasers, Nano-Optoelectronics, MBE growth & characterization, Laser ablation, Sol-Gel, Chemical bath deposition, dip coating, Nano-Electrochemistry, Electrospinning, Nanofibers, Polymer Nanocomposites, Quantum Dots, Quantum Wires, InAs/InP, porous silicon, CdS, PbS, PbSe, ZnS, CuInSe<sub>2</sub>, Solar Cells, silver (Ag) nanoparticles, RHEED, AFM, PL, UV-Vis, FTIR, EL, X-ray diffraction, XPS.

**Main field of study:** Nano-Surface physics, Thin Films and Nano Science & Nanotechnology.

## Education

**18 December 2008** PhD in Physics with Highest Distinction (**Highest honours**), [INSA](#), Rennes (France)

**9 September 2004** Master Degree in Physics (1<sup>st</sup> year) “Light and Matter Interaction”, [Université de Rennes 1](#), France

**17 October 1999** Postgraduate studies diploma in Physics (1<sup>st</sup> year), “Electronic solids Physics”, with Highest Distinction (*first graduate student*: mention **Excellent**), Aleppo University, syria

**27 September 1998** Bachelor (BSc) in science physics and chemistry with Highest distinction (*first graduate student*, mention **very good**), Aleppo University, syria

## Skills

### Research interests

#### Material Sciences:

\* **Growth:** Gaz and solid Source Molecular Beam Epitaxy (**MBE**), ultrahigh vacuum techniques, Magnetron Sputtering, Electrospinning, electrochemical deposition, Sol-Gel, Wet chemistry, pulse laser ablation, Dip coating

\* **Structural properties:** Atomic Force Microscopy (**AFM**), Scanning Electron Microscopy (**STM**), X-Ray Diffraction, Reflection High Energy Electron Diffraction (**RHEED**).

\* **Optical properties/Laser Technology:** Continuous-wave Photoluminescence (**CPL**), Photoluminescence Excitation Spectroscopy, UV-Vis Spectroscopy, FTIR Spectroscopy Electroluminescence (EL), Cryogenics (Liquid Helium & Nitrogen)- III-V laser heterostructure process - Clean room.

\* **Computer skills/Acquisition & data processing:** Windows' Office suite (Word, Excel, PowerPoint, Access, Flex PDE) Open Office, Windows, Internet, , LaTeX English and Arabic, Photoshop CS, Network administration, Scientific Softwares (Nano softwares, Origin, Matlab, LabView, Crocodile Physics & Chemistry,....), Other services program .....

---

Dr. Ibrahim alghoraibi

\* **Communication/Languages:** Arabic: Mother language, French: Fluent, English: Intermediate (Special course of English for master degree: Aleppo University, Syria).

## Research interests:

- ❖ Nanomaterial, thin films deposition and characterization, Electrical, magnetic and optical properties of nano thin films, Industrial application of thin film coatings.
- ❖ Surface studies using different techniques like Auger , XPS electron spectroscopies, Low electron energy diffraction, Surface roughness study using Atomic force Microscopy and optical methods like UV, PL, EL....etc
- ❖ Study and fabrication of gas sensors based on metal oxides, porous silicon and carbon nanostructures and hybrids.
- ❖ Fabrication of solar cells based on CdS/CdTe , CuInSe<sub>2</sub>/CdS/ZnO
- ❖ Nano particles formation using pulse laser ablation and arc discharge method.
- ❖ Nanofibre formation using electrospinning technique
- ❖ Electrospun fibers and composites for tissue engineering applications, Micro-Ultra-Nano-RO-Filtration and Purification of water.
- ❖ Polymer fibers for multifunctional applications.
- ❖ Self-cleaning, superhydrophobic and superhydrophilic materials
- ❖ Quantum dots elaboration using Epitaxy.
- ❖ Sol-Gel, Wet chemistry and chemical bath (solution) deposition.
- ❖ Nano Material & Devices: Nanosensors, CNT.
- ❖ Synthesis of Nano-Silver Colloids (Metallic Nanoparticles)
- ❖ Application of Silver Nanoparticles and Nanofibers in Drinking Water Purification
- ❖ Application of nanotechnology in medical:
- ❖ Anti-Microbial, Anti-Bacterial and Anti-Fungal
- ❖ Dental Materials Scaffolds
- ❖ Scaffolds for teeth tissue engineering
- ❖ Nanostructure Scaffolds for tissue engineering
- ❖ Drug delivery
- ❖ Nano-biopolymeric fibers in wound healing
- ❖ Wound dressing

## Research projects

- \***2004-2007:** European network of excellence on Self-Assembled semiconductor Nanostructures for new Devices in photonics and Electronics (SANDiE)
- \***2004-2007:** European Network of Excellence on Photonic Integrated Components and Circuits (EPIXNET)
- \***2010-2017:** Fabrication and Characterization of Nanofibers by Electrospinning Technique, Department of Physics, University of Damascus.
- \***2010-2017:** Self-assembled InAs(Sb) quantum dots and quantum wires nanostructures, Department of Physics, University of Damascus.
- \***2010-2014:** Preparation and Characterization of Nanomaterial Films Amorphous Silicon For Solar Cells, Department of Physics, University of Damascus.
- \***2010-2014:** Preparation and Characterization of Nanocrystalline Silicon Thin Films for Solar Cell Applications, Department of Physics, University of Damascus.
- \***2016-2017:** Project of Biosynthesis of nano-silver and their anti-microbial effects, faculty of Pharmacy, Arab International University, syria

## Professional experience (Research-Projects and

- \* **October 2009 - December 2017**  
Doctor at the department of Physics, University of Damascus.
- \* **October 2004 - December 2008**  
PhD thesis: **Growth of InAs nanostructures on InP substrates for laser applications at 1,55  $\mu\text{m}$  in optical telecommunications**, [LENS Laboratory](#), INSA Rennes – France.  
Advisor: [Prof. N. Bertru](#) and [Prof. A. Le Corre](#)

Dr. Ibrahim alghoraibi

## Research Activities:

**\* February 2004-September 2004**

**Growth and characterisation of alloy AlInAs by Molecular Beam Epitaxy,** Laboratory [LENS Laboratory](#), INSA Rennes – France, Advisor: [Prof. N. Bertru](#)

**\* September 2001-September 2003**

Assistant Professor at the department of Physics, University of Damascus.

**\* September 1999-2001**

**Analytical Study of the ferrous-xylene orange-gelatin (FXG) gel dosimeter,** Department of Physics, Univ of Aleppo- Syria, Advisor: Prof. H. iskif and Prof A. Taleb.

## Professional experience (Teaching)

**1999-2001** Teaching in 1<sup>st</sup> year BSc of Practical Course in physics at University of Aleppo, Syria

**2005-2006** Part-time teaching at Institut National des Sciences Appliquées (INSA), France ~150 hours. Practical Course at BSc level (2<sup>nd</sup> year). Electricity, Electronics, Optics.

**2001-2003** Teaching assistance in 1<sup>st</sup> year BSc of Practical Course at University of Damascus, Syria, Electricity, Electronics, Optics, Thermodynamics, electromagnetism.

**2011-2012** Assistant Professor in 1<sup>st</sup> theoretical and Practical Course at University of Kalamon- Faculty of medicine, Syria/**General Physics 1&2 for dentist and pharmacy.**

**2012-2013** Assistant Professor in 1<sup>st</sup> theoretical and Practical Course at University of Rashid- Faculty of engineering, Syria/**General Physics 1&2 for Engineers**

**2014-2019** Assistant Professor in 1<sup>st</sup> theoretical Course at Arab International University- Faculty of pharmacy, Syria/**Medical Physics for pharmacy.**

**2009-2019** Assistant Professor in 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>rd</sup> year BSc of theoretical and Practical Course at University of Damascus, Syria /Optics, Electronics, Laser, Quantum physics, renewable energy, Basic physics courses & Laboratories, Modern Physics, Electronics Lab/.and Nanotechnology, Advanced physics, Thin films Nanostructure, research method for **Master course.**

## Research Activities:

- **Supervised** 5 PhD and 16 MSc
- **Published** more than 42 paper in international journal
- **Contributed** to more than 41 papers in international and national conference
- **Contributed** to more than 8 research projects
- **peer-reviewer:** Iranian Journal of Chemistry and Chemical Engineering(IJCCE), World Journal of Condensed Matter Physics , Journal for the Basic Sciences, Damascus University
- **Member in:**
  - ❖ Syrian Nanoscience & Technology Initiative Community (SNIC), head of unit Nanotechnology in department of physics, university of Damascus.  
<http://damascusuniversity.edu.sy/nano/home>
  - ❖ Syrian Society for Scientific Research (SSSR)/ <http://www.syssr.org>
  - ❖ Journal of Orthodontics & Endodontic, <http://orthodontics-endodontics.imedpub.com/editors.php>
- **Programme Committee Member/Organizer:** International Seminar on Nanomaterials in Energy and Environment (INMEE-2010) 21st-23rd September 2010, Damascus, Syria.
- **Participated in nanotechnology and materials conference** in Syria, France, Swiss, USA, Nottingham , spain, Germany, UK, Autriche, Turkey, Morocco, Pakistan, United Arab Emirates, Iraq and Egypt.

---

Dr. Ibrahim alghoraibi

**Editorial board in:**

1. American Journal of Nanosciences
2. Nanoscience & Technology: Open Access
3. Advances in Biomedicine and Pharmacy
4. Journal of Orthodontics & Endodontics
5. Modern Approaches in Oceanography and Petrochemical Sciences
6. Biomedical Research: Current Trends
7. An International Journal of Biomedicine, Natural Products and Pharmacy
8. Iranian Journal of Chemistry and Chemical Engineering

**Other**

Reading diverse, Tinnes, Football, Volley-ball

**Detailed PhD work and achievements**

I started my PhD work at INSA Engineering School in Rennes (Brittany, in France) in year 2004.

The title of the PhD project can be translated “Growth of InAs nanostructures on InP substrates for laser applications at 1,55  $\mu\text{m}$  in optical telecommunications”

I joined here an abstract of the printed final version of my manuscript:

**Abstract:**

In recent years, large interest has been devoted to quantum dot and quantum wire lasers. The main motivation of these research works is the expected improvements of the 1,55  $\mu\text{m}$  emitting laser performances. The work reported in this manuscript concerns InAs nanostructures grown on InP substrates by molecular beam epitaxy. Two types of lasers have been studied. They are based respectively on InAs/GaInAsP quantum dash formed on InP(100) and InAs/AlGaInAs quantum dots grown on InP(311)B substrates. After nanostructure formation studies and optimizations, quantum dashes based laser emitting at room temperature with threshold current density of 375  $\text{A}/\text{cm}^2$  have been achieved on InP (100) substrates. On (311)B substrates, QD lasers working up to 212 K have fabricated. In this laser, a large decrease of the threshold current from 110 to 140 K is observed. Complementary experiments show that the negative  $T_0$  regime can be related to a delayed thermalisation of carriers within quantum dot ensemble.

**Achievements:**

During this work I achieved all of the objectives that were set at the beginning of the contract, which were to develop a new understanding of the growth processes in the InAs/InP(001) quantum Wires system and allow a first laser emission at room temperature.

---

Dr. Ibrahim alghoraibi

By developing a great autonomy and at the same time learning how to work in a team, within the Epitaxy Group, I was able to conduct my research and address the technical difficulties of working in the epitaxy domain (MBE maintenance, Ultra-high vacuum techniques, calibrations...). Moreover I collaborated with other research teams at national and international level, for example in the framework of two European networks of Excellence (NoE [SANDIE](#) and [EPIXNET](#)). I have designed the epitaxy processes and grown personally more than hundred different samples. I have characterized them both by structural means (*in-situ* Reflection High Energy Diffraction: RHEED, and *ex-situ*: X-ray diffraction, Atomic Force Microscopy) and optical means (Photoluminescence spectroscopy, including use of Nitrogen and Helium cooling...). These lead to a better understanding of the InAs/InP system and allowed us to reach state-of-the-art results in our community. I have collaborated with other groups in the laboratory to design laser structure, have grown and measured them. The most striking result is the record low threshold current density laser that is a direct consequence of my growth optimizations and studies.

My work has lead to numerous publications in international journals (four as first author) and in international & national conferences. As it is the best way to judge the quality and proficiency of my work, I attached a list of my publications as a separate file.

## Publications :

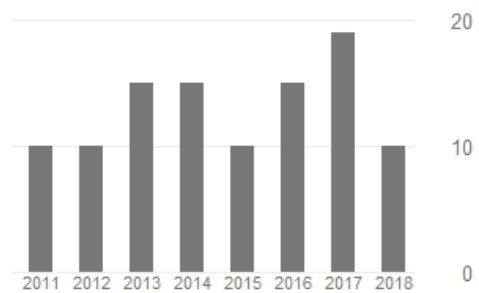
>161 citations, h-index= 9



### Dr. Ibrahim ALGHORAIBI

Assistant Professor in Physics  
 Adresse e-mail validée de damasuniv.edu.sy  
[Nano-Surface physics](#) [Nano Science & Nan](#)

	Toutes	Depuis 2013
Citations	161	86
indice h	9	6
indice i10	6	3



<https://scholar.google.com.my/citations?user=P8YqZ0AAAJ&hl=en>

1. **Alghoraibi**, L. Joulaud, C. Paranthoen, A. Le Corre, O. Dehaese, N. Bertru, H. Folliot, P. Caroff, S.Loualiche, “[InAs self-assembled quantum dot and quantum dash lasers on InP for 1,55 μm optical telecommunications](#)”. **IEEE**, vol. 2, p. 2085-2090 (2006).
2. **Alghoraibi**, T. Rohel, N. Bertru, A. Le Corre, A. Létoublon, P. Caroff, O. Dehaese, and S. Loualiche, “[Self-assembled InAs quantum dots grown on InP \(311\)B substrates : Role of buffer layer and amount of InAs deposited](#)”. **J. Crystal Growth**, vol. 293, p. 263-268 (2006).
3. **Alghoraibi**, T. Rohel, R. Piron, N. Bertru, C. Paranthoen, G. Elias, A. Nakkar, H. Folliot, A. Le Corre, and S. Loualiche. “[Negative characteristic temperature of long wavelength InAs/AlGaInAs quantum dot lasers grown on InP substrates](#)”. **Appl. Pys. Lett**, 91, p. 261105 (2007).
4. **Alghoraibi**, T. Rohel, R. Piron, N. Bertru, C. Paranthoen, G. Elias, A. Nakkar, H. Folliot, A. Le Corre, and S. Loualiche. “[Negative characteristic temperature of long](#)

Dr. Ibrahim alghoraibi

- wavelength InAs/AlGaInAs quantum dot lasers grown on InP substrates". **IEEE**, p. 1-5 (2008).
5. P. Caroff, N. Bertru, A. Le Corre, O. Dehaese, T. Rohel, **I. Alghoraibi**, H. Folliot and S. Loualiche, "Achievement of High Density InAs Quantum Dots on InP (311)B Substrate Emitting at 1.55  $\mu\text{m}$ ". **Jpn. J. Appl. Phys**, vol. 44 L 1069(2005).
  6. F. Doré, A. Ballestar, C. Cornet, N. Bertru, O. Dehaese, **I. Alghoraibi**, R. Piron, J. Even and S. Loualiche "Structures à îlots quantiques sur substrat InP(100) pour l'émission dans le moyen infrarouge (2-5  $\mu\text{m}$ )", **Journal de Physique IV: The European Physical Journal (EPJ)**, vol. 135, 283-4 (2005).
  7. F. Doré, C. Cornet, A. Schliwa, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre, and S. Loualiche, "InAsSb/InGaAs quantum nanostructures on InP (100) substrate : observation of 2,35  $\mu\text{m}$  photoluminescence", **Physica status solidi(c)** 3, 524 (2006).
  8. F. Doré<sup>1</sup>, A. Ballestar<sup>1</sup>, C. Cornet<sup>1</sup>, N. Bertru<sup>1</sup>, **I. Alghoraibi**<sup>1</sup>, R. Piron<sup>1</sup>, J. Even<sup>1</sup> et S. Loualiche<sup>1</sup>, "Structures à îlots quantiques sur substrat InP(100) pour l'émission dans le moyen infrarouge (2-5  $\mu\text{m}$ )", **J. Phys. IV France**, vol. 135, p. 283-284 (2006).
  9. F. Doré, C. Cornet, P. Caroff, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre et S. Loualiche, "InAs(Sb)/InP(100) quantum dots for mid-infrared emitters: observation of 2,35  $\mu\text{m}$  photoluminescence", **Physica Status Solidi(c)**, 3, 11, 3920-3 (2006).
  10. F. Doré, J. Even, C. Cornet, A. Schliwa, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre et S. Loualiche, "A theoretical and experimental study of  $\lambda > 2 \mu\text{m}$  luminescence of quantum dots on InP substrate". **AIP Conference Proceedings**, vol. 893, p. 889 (2007).
  11. Nakkar, H. Folliot, A. Le Corre, F. Doré, I. Alghoraibi, C. Labbé, G. Elias, S. Loualiche, M-E Pistol, P. Caroff, C. Ellström. "Optical properties and morphology of InAs/InP (113)B surface quantum dots", **Appl. Pys. Lett**, 92, 231911 (2008).
  12. G. Elias, A. Letoublon, R. Piron, **I. Alghoraibi**, A. Nakkar, N. Chevalier, K. Tavernier, A. Le Corre, N. Bertru and S. Loualiche " Achievement of High Density InAs/GaInAsP Quantum Dots on Misoriented InP(001) Substrates Emitting at 1.55  $\mu\text{m}$  " **Jpn. J. Appl. Phys**, Volume 48, Issue 7, pp. 070204 (2009).
  13. G. Elias, A. Letoublon, R. Piron, **I. Alghraibi**, K. Tavernier, N. Chevalier, N. Bertru, A. Le Corre and S. Loualiche "Improvement of 1.55  $\mu\text{m}$  InAs QD laser using vicinal (001)InP substrate" Indium Phosphide & Related Materials Proceedings (IEEE), 41-44 (2009).
  14. **Ibrahim Alghoraibi** "InAs(Sb)/InGaAs(P) Quantum Nanostructures on InP (100) for Mid infrared Emitters" International Journal of science Georesorce 1 (12) 2012.
  15. Faten Alfeel, Fowzi Awad, **Ibrahim Alghoraibi** and Fadi Qamar "Using AFM to Determine the Porosity in Porous Silicon" Journal of Materials Science and Engineering A 2 (9) (2012) 579 583.

16. Faten Alfeel, Fowzi Awad, **Ibrahim Alghoraibi** and Fadi Qamar "Change of diffused and scattered light with surface roughness of p-type Porous Silicon" International Journal of Nano Dimension Materials A-13-04-24.
17. Abdul Razzak Ghazal<sup>1</sup>, Rabab sabbagh<sup>1</sup>, **Ibrahim alghoraibi**<sup>2</sup>, "Using atomic force microscope to compare the surface roughness of superelastic and thermal activated Nickel-Titanium wire for orthodontics application" Journal of Hadramout, University for Natural and Applied Sciences, Vol 2 (2013).
18. Ahmed Abdul-Kareem, **Ibrahim Alghoraibi**, Mohamed-Ali Alsayed-Ali " Effect of applied voltage and needle size on morphology of Polyamide 66 nanofiber Formed by Electrospinning Technique " Journal of Engineering Science, Damascus University, N2, 2013
19. Abdalrahim Alahmad<sup>1</sup>, Mustafa Eleoui<sup>1</sup>, Ahmad Falah<sup>2</sup> and **Ibrahim Alghoraibi**<sup>2</sup> "Preparation of colloidal silver nanoparticles and structural characterization "Physical Sciences Research International Vol. 1(4), pp. 89-96, October 2013 .
20. **Ibrahim Alghoraibi**<sup>1</sup>, Abdalrahim Alahmad<sup>2</sup>, "Colloidal Synthesis and Structural Characterizations of Silver Nanoparticles by using Wet Chemistry" International Journal of ChemTech Research Vol.6, No.1, pp 871-880, (2014).
21. Raghad Zein, **Ibrahim Alghoraibi**\*, "Effect of Deposition Time on Structural and Optical Properties of ZnS Nanoparticles Thin Films Prepared by CBD Method", Int.J. ChemTech Res, Vol.6, No.5, pp 3220-3227 (2014).
22. **Ibrahim Alghoraibi** , "Effect of Deposition Time on the Nanocrystalline PbS Thin Films Synthesized by Chemical Solution Deposition Method: Structural Characterization", Int.J. ChemTech Res, Vol.6, No.5, pp 2725-2731, (2014)
23. **Ibrahim Alghoraibi** , " Fabrication and Characterization of polyamide-66 Nanofibers Via Electrospinning technique : Effect of Concentration and viscosity", Int.J. ChemTech Res, Vol.7, No.01, pp 20-27, , (2014)
24. Abdul Razzak A. Ghazal<sup>1</sup>, Mohammad Y. <sup>2\*</sup> , Rabab Al-Sabbagh<sup>1</sup> , Ibrahim Alghoraibi<sup>3</sup> and Ahmad Aldiry<sup>4</sup> "An evaluation of two types of nickel-titanium wires in terms of micromorphology and nickel ions' release following oral environment exposure" Progress in Orthodontics (2015) 16:9
25. Zoalfakar Almahmoud<sup>1\*</sup>, **Ibrahim Alghoraibi**<sup>2</sup>, Tarek Zaerory<sup>1</sup>," Influence of complexing agent on the Morphology Properties of PbS Thin Films Studied by Atomic Force Microscopy", Iraqi journal of applied physics (IJAP), vol. (11), no. (2), April-June 2015, pp. 13-18.
26. Zoalfakar Almahmoud<sup>1\*</sup>, **Ibrahim Alghoraibi**<sup>2</sup>, Tarek Zaerory<sup>1</sup>," Controllable Synthesis of Lead sulfide Nanoparticles using HXAHC as Complexing Agen: Effect of the Concentration complexing Agent on Particle Size and Crystallinity", Research Journal of Aleppo University . Basic Sciences Series, Vol.109, 12291 (2015).

27. Zoalfakar Almahmoud<sup>1\*</sup>, **Ibrahim Alghoraibi**<sup>2</sup>, Tarek Zaerory<sup>1</sup>, " study of the complexing agent (TEA) effect on the nanostructure and optical properties of PbS thin film", Research Journal of Aleppo University. Basic Sciences Series, (2015).
28. Zoalfakar Almahmoud<sup>a</sup>, **Ibrahim Alghoraibi**<sup>b\*</sup>, Tarek Zaerory<sup>a</sup>, " Effect of the hydrazine hydrate concentration on structural and optical Properties of PbS nanostructures films synthesized by chemical solution deposition ", Journal for the Basic Sciences, Damascus University, 2461 (2015).
29. Zoalfakar Almahmoud<sup>a</sup>, **Ibrahim Alghoraibi**<sup>b\*</sup>, Tarek Zaerory<sup>a</sup>, " Investigation of Structure and Optical Properties of Chemically Deposited Nanoparticles PbS Thin Film at different Lead Concentrations", Journal for the Basic Sciences, Damascus University, 29 (2016).
30. Zoalfakar Almahmoud<sup>1</sup>, **Ibrahim Alghoraibi**<sup>2</sup>, " Influence of Complexing Agents on Structural Properties of PbS Thin Films Prepared by CSD Method", IJAP, vol. (12), no. (1), January-March 2016, pp. 23-26.
31. Kenana Tarabain, **Ibrahim Alghoraibi** , " Influence of selenium ions concentration on the structural and optical properties of lead selenide thin films grown by chemical bath deposition ", Journal for the Basic Sciences, Damascus University, 1025 (2016).
32. **I. Alghoraibi** and R. Zein, "Silver Nanoparticles: Advances in Research and Applications is Approaching ",ebook, ISBN: 978-1-53610-586-5, (2017).
33. Abeer Baioun, Hassan Kellawi, Ahamed Falah and **Ibrahim Alghoraibi** "A novel non electrically prepared nano prussian yellow film modified electrode:as a sensor for ascorbic acid" Current Nanoscience, Volume 13, 6 Issues, 2017
34. Rawad noufal and **Ibrahim Alghoraibi**, "Synthesis Al doping ZnO thin films by Sol-Gel method and characterization the structural and optical properties", Journal for the Basic Sciences, Damascus University, 937 (2017).
35. Eyad Abdur-Rahman<sup>a</sup> and Ibrahim Alghoraibi<sup>b\*</sup>, "Effect of NaOH concentration and time on wet chemical anisotropic etching of low-resistivity crystalline silicon wafer", Journal for the Basic Sciences, Damascus University , 1423 (2017).
36. Eyad Abdur-Rahman, **Ibrahim Alghoraibi**, and Hassan Alkurdi, "Effect of Isopropyl Alcohol Concentration and Etching Time on Wet Chemical Anisotropic Etching of Low-Resistivity Crystalline Silicon Wafer," International Journal of Analytical Chemistry, vol. 2017, Article ID 7542870, 9 pages, 2017. doi:10.1155/2017/7542870
37. **Ibrahim Alghoraibi**<sup>a,b\*</sup> and Sandy Alomari<sup>a</sup>, "Different methods for nanofibers design and fabrication" Handbook of Nanofibers, Springer (2018).
38. Alaa Alddin Mardini, Ahamed Falah, **Ibrahim Alghoraibi**, " Hydrothermal Synthesis of Nickel Nanoparticles", Journal for the Basic Sciences, Damascus University, (2018).
39. Muhammad AbdulRahman and **Ibrahim Alghoraibi** "Theoretical investigation of



phase-mismatched second-harmonic conversion efficiency in BBO crystal", *Optik*, (2018), [doi.org/10.1016/j.ijleo.2018.01.126](https://doi.org/10.1016/j.ijleo.2018.01.126).

40. Malek Alghdeir, Khaled Mayya, Mohamed Dib, **Ibrahim Alghoraibi** "Characterization of LDPE/SiO<sub>2</sub> Composite Barrier Films", *J. Mater. Environ. Sci.*, Volume 9, (2018).
41. R. Zein and **I. Alghoraibi**, "Influence of bath temperature and deposition time on topographical and optical properties of nanoparticles ZnS thin films synthesized by chemical bath deposition method," *Journal of Nanomaterials*, vol. 2019, Article ID 7541863, 13 pages, 2019. <https://doi.org/10.1155/2019/7541863>.
42. Ola Amer and Ibrahim Alghoraibi, "Morphological and optical characterization of ZnO thin films nanostructure Synthesized via Sol-Gel and dip-coating method", *Journal for the Basic Sciences*, Damascus University, 346 (2019).

### Conferences Internationals:

43. **I. Alghoraibi**, L. Joulaud, C. Paranthoen, A. Le Corre, O. Dehaese, N. Bertru, H. Folliot, P. Caroff, S. Loualiche, "InAs self-assembled quantum dot and quantum dash lasers on InP for 1,55  $\mu\text{m}$  optical telecommunications". *Second International Conference on Information and Communication Technologies, 2006. ICTTA '06. 2nd*, Damascus, Syria, (oral) 24-28 April, (2006).
44. **Alghoraibi**, L. Joulaud, C. Paranthoen, A. Le Corre, O. Dehaese, N. Bertru et S. Loualiche. "Self-Organization in Growth of InAs quantum dot and quantum dash lasers on InP for 1,55  $\mu\text{m}$  optical telecommunications". in *Workshop on laser science and applications*, Damascus, Syria, (oral), 13-15 November, (2006).
45. **Alghoraibi**, T. Rohel, R. Piron, A. Nakkar, H. Folliot, N. Bertru, A. L. Corre et S. Loualiche "InAs/InP quantum dots laser grown on (311)B substrates with AlGaInAs barriers" à LWQD,2007 : *International Workshop on Long Wavelength Quantum Dots : Growth and Applications*, Rennes, France, (Poster), 5-6 juil., (2007).
46. **I. Alghoraibi**, T. Rohel, R. Piron, N. Bertru, C. Paranthoen, G. Elias, A. Nakkar, H. Folliot, A. Le Corre, S. Loualiche. "Temperature Dependence of Threshold Current of InAs/AlGaInAs/InP Quantum Dot Laser", in *SQDA : International Workshop on Semiconductor Quantum Dot Devices and Applications*, Rennes, France, (Poster), 7-8 juil., (2008).
47. **Alghoraibi**, T. Rohel, R. Piron, N. Bertru, C. Paranthoen, G. Elias, A. Nakkar, H. Folliot, A. Le Corre, and S. Loualiche. "Negative characteristic temperature of long wavelength InAs/AlGaInAs quantum dot lasers grown on InP substrates". *3<sup>rd</sup> International Conference on Information and Communication Technologies, (ICTTA '08 3rd)*, Damascus, Syria, (oral), 7-11 April, (2008).
48. N. Bertru, **I. Alghoraibi**, P. Caroff, C. Paranthoen, H. Folliot, and A. Le Corre, "Low threshold current density (311)B QD lasers", in *Sixth International Workshop on Epitaxial Semiconductors on Patterned Substrates and Novel Index Surfaces*,

United Kingdom, Nottingham, (2006).

49. C. Cornet, O. Dehaese, L. Pedesseau, **I. Alghoraibi**, T. Rohel, A. Létoublon, J. Even, N. Bertru, A. Le Corre and S. Loualiche. “[Stransky-Krastanow Gas Source MBE growth and optical properties of InAs/GaP quantum](#)” in *Euro-MBE*, Sierra Nevada, Granada, Spain. (oral), 5-7 Mars, (2007).
50. F. Doré, C. Cornet, P. Caroff, A. Schliwa, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre, and S. Loualiche, “[InAsSb/InGaAs quantum nanostructures on InP \(100\) substrate : observation of 2.35 microns photoluminescence](#)”, in *International Symposium on Compound Semiconductors 32nd*, Europa-park, Germany, 18 - 22 septembre, (2005).
51. F. Doré, C. Cornet, P. Caroff, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, R. Piron, H. Folliot, A. Le Corre, and S. Loualiche. “[First observation of lamda greater than 2 micron photoluminescence of quantum dots on InP substrate](#)”. in *MIOMD-VII, Mid-infrared Optoelectronics: Materials and Devices*, Lancaster, UK, 12-14 septembre, (2005).
52. F. Doré, C. Cornet, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre, and S. Loualiche, “[First observation of 2.4 μm photoluminescence of InAsSb/InP quantum dots on InP\(100\) substrate](#)”, in *NGS12: 12th International Conference on Narrow Gap Semiconductors*, Toulouse, France, 3 – 7 juillet, (2005).
53. F. Doré, C. Cornet, A. Ballestar, J. Even, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre, and S. Loualiche, “[First observation of 2.4 microns photoluminescence of InAsSb/InP quantum dots on InP substrate](#)”, in *4th International Conference on Quantum Dots*, Chamonix-Mont Blanc, France, (2006).
54. F. Doré, J. Even, C. Cornet, A. Schliwa, N. Bertru, O. Dehaese, **I. Alghoraibi**, H. Folliot, R. Piron, A. Le Corre, and S. Loualiche, “[A theoretical and experimental study of 1-2 μm photoluminescence of quantum dots on InP substrate](#)”, in *ICPS proceeding: International Conference on Physics of Semiconductors*, Vienne, Autriche, (2006).
55. F. Doré, C. Cornet, P. Caroff, **I. Alghoraibi**, A. Ballestar, C. Labbe, R. Piron, O. Dehaese, J. Even and S. Loualiche “[InAs\(Sb\)/InP quantum dots for mid-infrared emitters : comparison of InP\(100\) and InP\(311\)B](#)” in *IWSQDA, 2006: International Workshop on Semiconductor Quantum Dot Based Devices and Applications*, Paris, France, 16-17 mars, (2006).
56. G. Elias, A. Létoublon, P. Caroff, **I. Alghoraibi**, C. Cornet, A. Le Corre, A. Ponchet, O. Dehaese, N. Bertru. “[Study of InAs/InP \(311\)B stacked quantum dots for laser emission at 1,55 μm](#)” in *LWQD, 2007: International Workshop on Long Wavelength Quantum Dots: Growth and Applications*, Rennes, France, (Poster), 5-6 Juil, (2007).
57. Nakkar, H. Folliot, A. Le Corre, **I. Alghoraibi**, C. Labbé, J.-M. Lamy, C. Cornet et S. Loualiche. “[Optical properties and morphology of the quantum dots InAs/InP \(311\)B characterized by photoluminescence](#)” à *LWQD : International Workshop on Long Wavelength Quantum Dots: Growth and Applications*, Rennes, France, (Poster), 5-6 Juil, (2007).

---

Dr. Ibrahim alghoraibi

58. G.Elias , N. Bertu, A. Le Corre, A. Letoublon **I. Alghoraibi**, A.Nakkar, N,Chevalier, H.Folliot, S.Loualiche. “[Self-organized growth of InAs quantum dots on InP\(001\)](#)” in *SQDA, 2008: International Workshop on Semiconductor Quantum Dot Devices and Applications*, Rennes, France, (oral), 7-8 juil, (2008).
59. G.Elias, A. Letoublon, R. Piron, **I. Alghoraibi**, K. Tavernier, N. Chevalier, N. Bertru, A. Le Corre, S. Loualiche “[Improvement of 1.55 μm InAs QD laser using vicinal \(001\)InP substrate](#)” in *IEEE IPRM proceeding: International Conference on Indium Phosphide and Related Materials*, Newport Beach, CA, USA, (oral), 10 - 14 May (2009).
60. W. Lu, **I. Alghoraibi**, G. Elias, A. Nakkar, A. Letoublon, T. Rohel, H. Folliot, N. Bertru, a A. Le Corre, S. Loualiche “ [Wire to island transition in InAs/InP system : role of the surface energy](#) ” in *JA 2009: Journées Annuelles de la SF2M*, INSA-Rennes, 17 au 19 juin (2009).
61. **I.Alghoraibi**<sup>1</sup>, N. Bertru<sup>2</sup>, A. Le Corre<sup>2</sup>. “ [InAs/AlGaInAs/InP\(311\)B quantum dots laser](#) ”. in *Fifth Workshop on laser science and applications*, Damascus, Syria, (oral), 24-26 May, (2010).
62. **I.Alghoraibi**<sup>1</sup>, C. Parantoen<sup>2</sup>, A. Le Corre<sup>2</sup>, N. Bertru<sup>2</sup>, S. Loualiche<sup>2</sup>. “ [Semiconductor Nanostructure For 1.55 μm Optical Telecommunications Devices](#)”. *6th Nanoscience and Nanotechnology Conference (NanoTR-VI)* 15-18 June 2010, İzmir, Turkey.
63. **Alghoraibi**<sup>1</sup>, C. Paranthoen<sup>2</sup>, N. Bertru<sup>2</sup>, A. Le Corre<sup>2</sup> and S. Loualiche<sup>2</sup> “[Quantum Dot and Quantum Dash nanodevices for 1.55 μm optical telecommunications](#)”. *International Seminar on Nanomaterials in Energy and Environment (INMEE-2010)* 21<sup>st</sup>-23<sup>rd</sup> September 2010, Damascus, Syria.
64. **Ibrahim Alghoraibi**<sup>1</sup>, François Doré<sup>2</sup>, Nicolas Bertru<sup>2</sup> and Fidaa Altarsha<sup>1</sup> “ [Quantum Dots and Gas-Sensing](#) ”. *International Seminar on Nanomaterials in Energy and Environment (INMEE-2010)* 21<sup>st</sup>-23<sup>rd</sup> September 2010, Damascus, Syria.
65. Dr-Anwar Batal<sup>1</sup>, **Dr-Ibrahim Alghoraibi**<sup>2</sup>, Ibrahim Alo<sup>1</sup> “ [ZnO nanostructures Grown on glass Substrates by Ultrasonic Spray Pyrolysis Mechanism](#)”. *International Seminar on Nanomaterials in Energy and Environment (INMEE-2010)* 21<sup>st</sup>-23<sup>rd</sup> September 2010, Damascus, Syria.
66. Faten Alfeel, Fowzi Awad, **Ibrahim Alghoraibi** , Fadi Qamar “[Properties of porous silicon and applications in solar cells](#)”. *International Seminar on Nanomaterials in Energy and Environment (INMEE-2010)* 21<sup>st</sup>-23<sup>rd</sup> September 2010, Damascus, Syria.
67. Laila AbuReslan<sup>1</sup>, **Ibrahim Alghoraibi**<sup>1</sup>, Mohamed-Ali Alsayed-Ali<sup>2</sup> “[Electrospray for Nanostructures formation](#)”. *International Seminar on Nanomaterials in Energy and Environment (INMEE-2010)* 21<sup>st</sup>-23<sup>rd</sup> September 2010, Damascus, Syria.
68. Mohamed Ali ALSAYED ALI<sup>1</sup>; Zakaria ZALAM 2; **Ibrahim Alghoraibi**<sup>3</sup>; Laila Abu Reslan <sup>3</sup>; Firas Albalkhi<sup>1</sup> "an improved semi-classical kmc simulation approach at a nano-scale for electrons flow into plasma" in *ANM 2010, International*

69. Piron R., Dehaese O., Grillot F., Homeyer E., Zhou D., Dontabactouny M., Elias G., **Alghoraibi I.**, Tavernier K., Chevalier N. et al, "[Lasers à boîtes quantiques sur InP pour les applications télécom à 1,55  \$\mu\text{m}\$](#) " **Séminaire PONANT**, France (2010).
70. **Ibrahim Alghoraibi**, "[Nanoscience and Nanotechnology as Seen Through Quantum Dots and Quantum Wire](#)" *3<sup>rd</sup> International Conference on Nanotechnology* November 28 - 30, 2011, Al-Ain, United Arab Emirates.
71. Faten Alfeel, Fowzi Awad, **Ibrahim Alghoraibi** "[Using AFM to Determine the Porosity in Porous Silicon](#)" *International Conference on Nanomaterials and Nano Ethics*, Dec. 01 - 03, 2011 COMSATS Institute of Information Technology, Lahore, Pakistan.

## **Conferences Nationales & Workshops:**

72. **Ibrahim Alghoraibi**, Olivier Dehaese, Cyril Paranthoën, Nicolas Bertru, Philippe Caroff, Tony Rohel, Alain Le Corre, C. Cornet, H. Folliot and Slimane Loualiche. "[InAs/InP QD Growth Towards Low Densities](#)" *Workshops à Lausanne, Suisse* (orale) 14-16 Juin, (2005).
73. **Ibrahim Alghoraibi**, "[Single-Photon emitters characterization facility](#)". *Workshops à Lausanne, Suisse (Research report)* 15-19 august, (2005).
74. **Ibrahim Alghoraibi**, Nicolas Bertru, Olivier Dehaese, Tony Rohel, Alain Le Corre. "[Réalisation de boîtes quantiques pour l'application Laser: Le cas des boîtes quantiques InAs réalisés par épitaxie par jets moléculaires sur AlInAs](#)", in JNB1: 1<sup>ères</sup> Journées Nanosciences de Bretagne, Rennes, France, (2006).
75. N.Bertru, P.Caroff, A. Le Corre, **I.Alghoraibi**, O.Dehaese, "[Les applications laser des boîtes quantiques, Le cas des lasers à boîtes quantiques InAs réalisés sur substrats InP \(311\)B](#)" (orale), *JMC-10: Journées de la Matière Condensée*. Toulouse –France (2006)
76. N. Bertru, J. Ulloa, P. Koenraad, H. Folliot, A. Létoublon, W. Lu, **I. Alghoraibi**, A. Le Corre, J. Even, S.Loualiche, "[Emission de boîtes quantiques au-delà de 1,55  \$\mu\text{m}\$](#) ", *Orléan-France* (orale), 2008.
77. P. Caroff<sup>1</sup>, N. Bertu<sup>1</sup>, O. Dehaese<sup>1</sup>, A. Le Corre<sup>1</sup>, **I. Alghoraibi**<sup>1</sup>, E. Homeyer<sup>1</sup>, T. Rohel<sup>1</sup>, K. Tavernier, E. Macé A. Ponchet<sup>2</sup>. "[Contrôle de la densité et de l'organisation verticale et latérale de boîtes quantiques InAs/InP\(113\)B](#), in *JNB1 (1ères Journées Nanosciences de Bretagne)*, Rennes, France, (2006).
78. F. Doré, A. Ballestar, C. Cornet, N. Bertru, O. Dehaese, **I. Alghoraibi**, R. Piron, J. Even, and S. Loualiche, "[Structures à îlots quantiques sur substrat InP\(100\) pour l'émission dans le moyen infrarouge \(2-5 microns\)](#)", in *COLOQ 9 : Colloque sur les Lasers et l'Optique Quantique*, Dijon, France, 7 – 9 septembre (2005).
79. A. Letoublon, P. Caroff, N. Bertru, O. Dehaese, T. Rohel, A. Le Corre, **I. Alghoraibi**, A. Simon, C. Celebi, J.M. Ulloa, and P.M. Koenraad. "[Boîtes quantiques InAs/InP\(113\)B pour l'émission à 1,55  \$\mu\text{m}\$ : contrôle de la croissance et](#)

caractérisation Structurale”, in *11ème JNMO: Journées Nano-Micro Electronique et Optoélectronique*. Aussois, France (2006).

80. G.Elias<sup>1</sup>, N. Bertu<sup>1</sup>, A. Le Corre<sup>1</sup>, **I. Alghoraibi**<sup>1</sup>, A. Nakkar<sup>1</sup>, N. Chevalier, H. Folliot, S. Loualiche. “Epitaxie des boîtes quantiques hautes performances InAs/InGaAsP/InP(100) pour des applications laser” in *JNB2: 2ème Journées Nanosciences de Bretagne*, Nantes, France, (2008).
81. Letoublon, P. Caroff, N. Bertru, O. Dehaese, T. Rohel, A. Le Corre, **I. Alghoraibi**, A. Simon, C. Celebi, J.M. Ulloa, and P.M. Koenraad, “Boîtes quantiques InAs/InP(113) pour l’émission à 1.55 µm: contrôle de la croissance et caractérisation Structurale”, in *JNB1: 1ères Journées Nanosciences de Bretagne*, Rennes, France, (2006).
82. Letoublon, P. Caroff, N. Bertru, O. Dehaese, T. Rohel, A. Le Corre, **I. Alghoraibi**, A. Simon, C. Celebi, J.M. Ulloa, and P.M. Koenraad, “Boîtes quantiques InAs/InP(113) pour l’émission à 1.55 µm: contrôle de la croissance et caractérisation Structurale”, in *11ème JNMO: Journées Nano-Micro Electronique et Optoélectronique*, Aussois, France, 4-7 avril (2006).
83. Lu W., **Alghoraibi I.**, Elias G., Nakkar A., Létoublon A., Rohel T., Folliot H., Bertru N., Le Corre A., Loualiche S. “Transition fils boîtes dans le système InAs/InP (100) Transition fils boîtes dans le système InAs/InP (100) ” *Journées de la Société Française de métallurgie et matériaux (SF2M)*, France (2009).

## **References:**

Pr. **Slimane LOUALICHE** (directeur du laboratoire)

INSA Rennes, Bat 10, FOTON, Département de Matériaux et Nanotechnologies  
20 Avenue de Buttes de Coësmes, CS 14 315, 35 043 Rennes Cedex, FRANCE

TEL: ++33(0)2 23 23 86 19

E-mail: [slimane.loualiche@insa-rennes.fr](mailto:slimane.loualiche@insa-rennes.fr)

Pr. **Alain. Le Corre**, Director of MBE Growth Group at LENS

INSA Rennes, Bat 10, FOTON, Département de Matériaux et Nanotechnologies  
20 Avenue de Buttes de Coësmes, CS 14 315, 35 043 Rennes Cedex, FRANCE

TEL: ++33(0)2 23 23 83 06

E-mail: [alain.le-corre@insa-rennes.fr](mailto:alain.le-corre@insa-rennes.fr)

Pr. **Nicolas Bertru**, Director of my PhD thesis

INSA Rennes, Bat 10, FOTON, Département de Matériaux et Nanotechnologies  
20 Avenue de Buttes de Coësmes, CS 14 315, 35 043 Rennes Cedex, FRANCE

TEL: ++33(0)2 23 23 83 07

E-mail: [nicolas.bertru@insa-rennes.fr](mailto:nicolas.bertru@insa-rennes.fr)

Pr. **Hervé Folliot**, Directeur de la recherche et de la valorisation, INSA Rennes

Bat 10, FOTON, Département de Matériaux et Nanotechnologies

20 Avenue de Buttes de Coësmes, CS 14 315, 35 043 Rennes Cedex, FRANCE

TEL: ++33(0) 2 23 23 83 07

E-mail: [herve.folliot@insa-rennes.fr](mailto:herve.folliot@insa-rennes.fr)



Ibrahim Alghoraibi

[https://www.researchgate.net/profile/Ibrahim\\_Alghoraibi3](https://www.researchgate.net/profile/Ibrahim_Alghoraibi3)



Dr. Ibrahim ALGHORAIBI - Cita...

<https://scholar.google.fr/citations?user=P-8YqZ0AAAAJ>



Publications Authored by Dr Ib...

<http://www.pubfacts.com/author/manage/Ibrahim+Alghoraibi>



Ibrahim Alghoraibi | Damascus...

<https://damasuniv.academia.edu/DrIbrahimAlghoraibi>