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# Curriculum Vitae

## Dr. Mohamed Bouzidi

Department of Physics, College of Sciences,  
University of Ha'il,  
Kingdom of Saudi Arabia



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### • Personal information

**Birth place & date :** Sbeitla - 21/06/1986

**Nationality :** Tunisian

**Current employment :** Assistant professor in physics

**Mobile :** 0565950447

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**Linguistic Expertise :** Arabic/French/English

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### • Research interest

- Thin films and Nanotechnology
- Optical properties of semiconductors
- Optical spectroscopies
- MOVPE growth of semiconductors
- Solar Cells
- Photocatalysis

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### • Education

2016

**Ph.D Degree in Physics (Solid state physics)**

Research Unit on Heteroepitaxy and Applications (URHEA),  
Departement of Physics, Faculty of Sciences, University of Monastir,  
Tunisia

- **Thesis Title:** Optical characterization of III-Nitride semiconductors using photorefectance spectroscopy: The case of GaN grown by metal organic vapor phase epitaxy (MOVPE)

- **Qualification: VERY HONORABLE**

<b>2011</b>	<b>Master Degree in Quantum Physics</b> Faculty of Sciences, Tunisia, Tunis El Manar University, Tunisia
	<ul style="list-style-type: none"> <li>- <b>Master Title:</b> Annealing effects on structural and optical properties of Vanadium doped GaN thin films grown by metal organic vapor phase epitaxy (MOVPE)</li> <li>- <b>Laboratory:</b> Research Unit on Heteroepitaxy and Applications (URHEA), Departement of Physics, Faculty of Sciences, University of Monastir</li> <li>- <b>Qualification: <u>VERY GOOD</u></b></li> </ul>
<b>2009</b>	<b>Bachelor Degree in Fundamental Physics</b> Departement of Physics, Faculty of Sciences, University of Monastir
<b>2005</b>	<b>Baccalaureate Degree in Mathematics</b> El Athar School, Sbeitla, Tunisia
	<ul style="list-style-type: none"> <li>- <b>Qualification: <u>PRETTY GOOD</u></b></li> </ul>

- **Professional experience**

<b>2012-2015</b>	<b>Contractual assistant</b> in physics at Higher Institute of Applied Sciences and Technology, University of Sousse, Tunisia
<b>2016-2019</b>	<b>Assistant professor</b> in physics at Polytechnic School of Engineering, University of Monastir, Tunisia
<b>SINCE 2019</b>	<b>Assistant professor</b> in physics at university of Hail
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>- Teaching integrated courses of Physics for the first-year preparatory students (geometric optics, electrostatic, magnetostatic, electrokinetic, classical mechanics and thermodynamics).</li> <li>- Teaching integrated courses of semiconductors and optoelectronic devices for the first-year electrical engineering students.</li> <li>- Responsible for the physics laboratory <ul style="list-style-type: none"> <li>• Physics laboratory setup</li> <li>• Workshop Planning</li> <li>• Scheduling of the practical works and the use of labs and equipment</li> <li>• Preparation of purchase orders required for practical work.</li> </ul> </li> </ul>

- Organization of scientific and cultural activities (company visits, study tours, scientific days, school holidays....).

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- **Personal skills and competences**

- Operating standard temperature-dependent photoluminescence spectroscopy.
- Operating standard temperature-dependent photoreflectance spectroscopy.
- Operating UV-visible spectrophotometer
- MOVPE growth of III-V semiconductors

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- **Publications in Referred Academic Journals**

1. **Mohamed Bouzidi**, Lotfi Sellaoui, Mansour Mohamed, Dison S.P. Franco, Alessandro Erto, Michael Badawi, “*A comprehensive study on paracetamol and ibuprofen adsorption onto biomass-derived activated carbon through experimental and theoretical assessments*” **Journal of Molecular Liquids**, 376 (2023) 121457  
<https://www.sciencedirect.com/science/article/pii/S016773222300260X?dgcid=coauthor>
2. Ashwaq Abuhusain, Fahad Abdulaziz, M. Gandouzi, Abdullah S. Alshammari, **M. Bouzidi**, Mansour Mohamed, Z.R. Khan, “*Experimental and theoretical investigation of pure and (Co,Sr) co-doped CdS system for optoelectronics applications: A quantitative comparison*”, **Physica B: Condensed Matter**, 655 (2023) 414735  
<https://www.sciencedirect.com/science/article/abs/pii/S0921452623001023?via%3Dihub>
3. Mansour Mohamed, A. Sedky, Abdullah S. Alshammari, Z. R. Khan & **M. Bouzidi**, *Structural and Nonlinear I–V Characteristics of Co-Substituted Sn<sub>1-x-y</sub>Zn<sub>x</sub>MyOz Varistors with Various x, y and M*, **J. Electron. Mater.** (2023)  
<https://doi.org/10.1007/s11664-022-10207-7>
4. Mansour Mohamed, A. Sedky, Abdullah S. Alshammari, Z.R. Khan, **M. Bouzidi**, M. Gandouzi, “*Structural, morphological, optical, photocatalytic activity investigations of Bi doped ZnO nanoparticles*” **Optical Materials**, 136 (2023) 113347  
<https://www.sciencedirect.com/science/article/abs/pii/S0925346722013866?via%3Dihub>
5. Lotfi Sellaoui, Mohamed Bouzidi, Dison S.P. Franco, Abdullah S. Alshammari, Mohamed Gandouzi, Jordana Georgin, Naim Bel Haj Mohamed, Alessandro Erto, Michael Badawi, “*Exploitation of Bauhinia forficata residual fruit powder for the adsorption of cationic dyes*”, **Chemical Engineering Journal**, 456 (2023) 141033

6. **Mohamed Bouzidi**, Wafa Malek, Nouredine Chaaben, Abdullah S. Alshammari, Ziaul Raza Khan, Mohamed Gandouzi, Monsour Mohamed, Ahmed Rebey, Abdullah A. Alatawi, Abdullah I. Alhassan, Abdullah G. Alharbi, Jean Paul Salvestrini, Mohammad Khaled Shakfa, “*Effects of the diameter of thermally generated nanopits on carrier dynamics in AlGaIn/GaN heterostructures*”, **Optical Engineering**, 61 (2022) 105106

<https://www.spiedigitallibrary.org/journals/optical-engineering/volume-61/issue-10/105106/Effects-of-the-diameter-of-thermally-generated-nanopits-on-carrier/10.1117/1.OE.61.10.105106.short>

7. **M. Bouzidi**, A. Maaoui, N. Chaaben, Abdullah S. Alshammari, Z. R. Khan, M. Mohamed, “*Downconversion mechanism in Er<sup>3+</sup>/Yb<sup>3+</sup> codoped fluorotellurite glasses to enhance the efficiency of c-Si PV cells*”, **Journal of Non-Crystalline Solids**, 595 (2022) 121837

<https://www.sciencedirect.com/science/article/abs/pii/S0022309322004343?via%3Dihub>

8. Naim Bel Haj Mohamed, **Mohamed Bouzidi**, Sabri Ouni, Abdullah S. Alshammari, Ziaul R. Khan, Mohamed Gandouzi, Mansour Mohamed, Nouredine Chaaben Adrian Bonilla-Petriciolet, Mohamed Haouari, “*Statistical physics analysis of adsorption isotherms and photocatalysis activity of MPA coated CuInS<sub>2</sub>/ZnS nanocrystals for the removal of methyl blue from wastewaters*”, **Inorganic Chemistry Communications**, 144 (2022) 109933

<https://www.sciencedirect.com/science/article/abs/pii/S1387700322007419?via%3Dihub>

9. Lotfi Sellaoui, Sarra Said, **Mohamed Bouzidi**, Abdullah Sarhan Alshammari, Ziaul Raza Khan, Mohamed Gandouzi, Carlos Schnorr, Guilherme Luiz Dotto, Luis Silva, Angélica Fátima Streit, Abdelmottaleb Ben Lamine and Alessandro Erto, “*Highlighting the adsorption mechanism of dyes onto activated carbon derived from sludge by theoretical physical analysis*”, **Environ Sci Pollut Res** (2022)

<https://link.springer.com/article/10.1007/s11356-022-23287-z#citeas>

10. Abdullah S. Alshammari, Ziaul Raza Khan, Mohamed Gandouzi, Mansour Mohamed, **Mohamed Bouzidi**, Mohd Shkir, Hamed M. Alshammari, “*Tailoring the optical properties and the UV detection performance of sol-gel deposited ZnO nanostructured thin films via Cd and Na co-doping*”, **Optical Materials**, 126 (2022) 112146

<https://www.sciencedirect.com/science/article/abs/pii/S092534672200180X?via%3Dihub>

11. Naim Bel Haj Mohamed, Sabri Ouni, Mohamed Bouzid, **Mohamed Bouzidi**, Adrian Bonilla-Petriciolet and Mohamed Haouari, “*Synthesis and preparation of acid capped CdSe nanocrystals as successful adsorbent and photocatalyst for the removal of dyes*

<https://link.springer.com/article/10.1007/s11356-022-20990-9#citeas>

12. Mansour Mohamed, A. Sedky, Abdullah S. Alshammari, Marzook S. Alshammari, Z. R. Khan, **M. Bouzidi** and M. Gandouzi, “*FTIR, optical, mechanical and magnetic properties of Zn<sub>1-x</sub>Fe<sub>x</sub>O with various Fe nanopowder additions*” **Appl. Phys. A** 128, 408 (2022).

<https://link.springer.com/article/10.1007/s00339-022-05506-z>

13. W. Malek, **M. Bouzidi**, N. Chaaben, Abdullah S. Alshammari, A. Rebey, “*In situ spectral reflectance analysis of the early stages of GaN thermal decomposition*” **Optik**, 265 (2022) 169491

<https://www.sciencedirect.com/science/article/abs/pii/S0030402622008051?via%3Dihub>

14. Z. R. Khan, Abdullah S. Alshammari, Mohd. Shkir, **M. Bouzidi**, Mansour Mohamed Manish Kumar, Rakesh K. Sonker, “*Effect of Ag doping on structural, morphological and optical properties of CdO nanostructured thin films*”, **Physica B: Condensed Matter**, 632 (2022) 413762

<https://www.sciencedirect.com/science/article/abs/pii/S0921452622001016?via%3Dihub>

15. W. Malek, A. Kahouli, **M. Bouzidi**, N. Chaaben, Abdullah S. Alshammari, J.P. Salvestrini, A. Rebey, “*Optical characterization by photoreflectance of GaN after its partial thermal decomposition*” **Optik**, 248 (2021) 168070

<https://www.sciencedirect.com/science/article/abs/pii/S0030402621016235?via%3Dihub>

16. Z. R. Khan, Abdullah S. Alshammari, **M. Bouzidi**, Mohd. Shkir, D.K. Shukla, “*Improved optoelectronic performance of sol–gel derived ZnO nanostructured thin films*”, **Inorganic Chemistry Communications**, 132 (2021) 108812

<https://www.sciencedirect.com/science/article/abs/pii/S1387700321003671?via%3Dihub>

17. Z. R. Khan, M. Gandouzi, Abdullah S. Alshammari, **M. Bouzidi**, Mohd. Shkir, S. Alfaify & Mansour Mohamed, “*Structural, linear and nonlinear optical properties of Zn@CdO nanostructured thin films: a quantitative comparison with DFT*”, **Journal of Materials Science: Materials in Electronics**, 32, (2021) 18304–18316

<https://link.springer.com/article/10.1007/s10854-021-06372-w>

18. Sabri Ouni, Naim Bel Haj Mohamed, **Mohamed Bouzidi**, Adrian Bonilla-Petriciolet, Mohamed Haouari, “*High impact of thiol capped ZnS nanocrystals on the degradation of single and binary aqueous solutions of industrial azo dyes under sunlight*”, **Journal of Environmental Chemical Engineering**, 9 (2021) 105915.

<https://www.sciencedirect.com/science/article/abs/pii/S2213343721008927?via%3Dihub>

19. Mohamed Gandouzi, Abdullah S. Alshammari, Z.R. Khan, **M. Bouzidi**, “DFT study of

the structural and optoelectronic properties of  $\text{Cd}_{1-x}\text{Ag}_x\text{S}$  half metallic alloys”, **Materials Science in Semiconductor Processing** 129 (2021) 105794

<https://www.sciencedirect.com/science/article/abs/pii/S1369800121001323?via%3Dihub>

20. Naim Bel Haj Mohamed, **Mohamed Bouzidi**, Nassim Ben brahim, Lotfi Sellaoui, Mohamed Haouari, Hatem Ezzaouia, “Impact of the stacking fault and surface defects states of colloidal CdSe nanocrystals on the removal of reactive black 5”, **Materials Science and Engineering: B** 256 ( 2021) 115029

<https://www.sciencedirect.com/science/article/abs/pii/S0921510720305365?via%3Dihub>

21. **Mohamed Bouzidi**, Abdullah S. Alshammari, Sonia Soltani, Ibrahim Halidou, Zied Chine, Ziaul Raza Khan, Nouredine Chaaben, Mohammad Khaled Shakfa, “Correlation of structural and optical properties of AlGaIn films grown on SiN-treated sapphire by MOVPE”, **Materials Science and Engineering: B** 263 ( 2021) 114866

<https://www.sciencedirect.com/science/article/abs/pii/S0921510720303731?via%3Dihub>

22. Ziaul Raza Khan, Abdullah S. Alshammari, **M. Bouzidi**, M. Gandouzi, Mohd. Shkir & S. Alfaify, “Emission and opto-dielectric nonlinearity in 2D Cd–ZnO–Na nanostructures: an effect of Na doping”, **Journal of Materials Science: Materials in Electronics**, 31, (2020) 12116–12126

<https://link.springer.com/article/10.1007/s10854-020-03758-0>

23. M. Souissi, T. Ghrib, A. Al-Otaibi, I. A. Al-Nuaim, **M. Bouzidi**, “Structural, optical and thermal properties of V-doped GaN thin films grown by MOCVD technique” **Thermochimica Acta**, 682 (2019) 178428

<https://www.sciencedirect.com/science/article/abs/pii/S0040603119300437>

24. B. Smiri, I. Fraj, **M. Bouzidi**, F. Saidi, A. Rebey, H. Maaref, “Effect of V/III ratio on the optical properties of (311) A and (311) B oriented InAlAs/InP heterostructures” **Results in physics**, 12 (2019) 2175-2182

<https://www.sciencedirect.com/science/article/pii/S2211379718333345>

25. H. Bouazizi, **M. Bouzidi**, N. Chaaben, Y. El Gmili, J.P. Salvestrini, A. Bchetnia, “Observation of the early stages of GaN thermal decomposition at 1200°C under  $\text{N}_2$ ”, **Materials Science & Engineering B** 227 (2018) 16-21

<http://www.sciencedirect.com/science/article/pii/S0921510717302520>

26. **M. Bouzidi**, S. Soltani, Z. chine, A. Rebey, M.K. Shakfa, “Time-resolved photoluminescence and photoreflectance spectroscopy of GaN layers grown on SiN-treated sapphire substrate: Optical properties evolution at different growth stages”, **Optical Materials** 73 (2017) 252-259

<http://www.sciencedirect.com/science/article/pii/S092534671730530X>

27. M. Ezzedini, **M. Bouzidi**, M. M. Qaid et al. “Comprehensive study of the structural, optical and electrical properties of InAlAs: Mg films lattice matched to InP grown by MOVPE”, **J Materials Sciences: Materials in Electronics** (2017) 1-7

<https://link.springer.com/article/10.1007/s10854-017-7770-0#citeas>

28. S. Soltani, **M. Bouzidi**, A. Touré, I. Halidou, Z. Chine, B. El Jani, M. K. Shakfa, “Effect of growth conditions on the Al composition and optical properties of  $\text{Al}_x\text{Ga}_{1-x}\text{N}$  layers

grown by AP-MOVPE”, **Thin Solid Films** 630 (2017) 2-6

<http://www.sciencedirect.com/science/article/pii/S0040609017301281>

29. **M. Bouzidi**, Z. Chine, B. El Jani, “*Effects of thermal ionized-impurities and mosaicity on the excitonic properties of GaN grown by MOVPE*”, **Optik** 142 (2017) 144-152

<http://www.sciencedirect.com/science/article/pii/S0030402617305818>

30. S. Soltani, **M. Bouzidi**, A. Touré, M. Gerhard, I. Halidou, Z. Chine, B. El Jani, M. K. Shakfa, “*Luminescence dynamics in AlGaIn with Al content of 20%*”, **Physica Status Solidi (a)** (2016) 1-6

<http://onlinelibrary.wiley.com/doi/10.1002/pssa.201600481/full>

31. D. Ben Hlel, **M. Bouzidi**, N. Sghaier, H. Fitouri, A. Gharbi, B. El Jani, N. Yacoubi, “*Photothermal deflection investigation of thermally oxidized mesoporous silicon*”, **Optik** 127 (2016) 4261–4266.

<http://www.sciencedirect.com/science/article/pii/S0030402616300122>

32. **M. Bouzidi**, S. Soltani, I. Halidou, Z. Chine, and B. El Jani, “*Photoreflectance investigation of exciton-acoustic phonon scattering in GaN grown by MOVPE*”, **Solid State Sciences** 54 (2016) 59-63.

<http://www.sciencedirect.com/science/article/pii/S1293255816300024>

33. **M. Bouzidi**, Z. Benzarti, I. Halidou, S. Soltani, Z. Chine, B. El Jani, “*Photoreflectance investigation of band gap renormalization and Burstein Moss effects in Si doped GaN grown by MOVPE*”, **Materials Science in Semiconductor Processing** 42 (2016) 273–276.

<http://www.sciencedirect.com/science/article/pii/S1369800115301001>

34. **M. Bouzidi**, Z. Benzarti, I. Halidou, Z. Chine, A. Bchetnia, B. El Jani, “*Photoreflectance study of GaN grown on SiN treated sapphire substrate by MOVPE*”, **Superlattices and Microstructures** 84 (2015) 13–23.

<http://www.sciencedirect.com/science/article/pii/S0749603615002505>

35. M. Souissi, **M. Bouzidi**, B. El Jani, “*The annealing effects of V-doped GaN thin films grown by MOCVD*”, **Journal of Crystal Growth** 340 (2012) 47–50.

<http://www.sciencedirect.com/science/article/pii/S0022024811010980>

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## • Presentations

1. **M. Bouzidi**, S. Soltani, I. Halidou, Z. Chine, B. El Jani, “*Effect of strain on the electronic band structure of GaN*”, International Conference on Multifunctional Materials and their Applications (2MAP-2016) TUNISIA, May 6-8, 2016. **(Oral)**.
2. **M. Bouzidi**, I. Halidou, Z. Chine, B. El Jani, “*Photoreflectance investigation of exciton characteristics in GaN grown by MOVPE*”, International Conference on Materials Spectroscopy Methods (ICMSM-2016), TUNISIA, March 25-28, 2016. **(Oral)**.
3. **M. Bouzidi**, Z. Benzarti, I. Halidou, S. Soltani, Z. Chine, B. El Jani, “*Photoreflectance investigation of gap renormalization and Burstein Moss effects in Si doped GaN grown*”

by MOVPE”, The 2015 E MRS Spring Meeting, May 11-15. Lille. France. **(Oral)**.

4. **M. Bouzidi**, Z. Benzarti, I. Halidou, S. Soltani, Z. Chine, B. El Jani, “*Electrical and optical properties of GaN grown on SiN treated sapphire substrate by MOVPE*”, The 2015 E MRS Spring Meeting, May 11-15. Lille. France. **(Poster)**.
5. **M. Bouzidi**, Z. Benzarti, I. Halidou, Z. Chine, B. El Jani, “*Thickness effects on the morphological, structural and optical properties of GaN grown by MOVPE*”, The 11<sup>th</sup> National Conference on Physics Research, 20-23 December 2014. Sousse, Tunisia. **(Oral)**.
6. **M. Bouzidi**, M. Souissi, A. Bchetnia, Z. Chine, B. El Jani, “*Thermal annealing effects on structural and optical property of V-doped GaN films*”, The Humboldt Kolleg On “Nanoscale Science & Technology”, 17-19 March 2012. Tunisia. **(Poster)**.