

CURRICULUM VITAE

Dr Jaber EL GHOU

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Personal Informations

Nationality: Tunisian
Birth place: Medenine (Tunisia)
Birth date: 10-01-1980

Education

- Master, University of TUNIS El Manar, July 2007
- Doctorat, University of SFAX (Tunisia), March 2012
- Post-Doctorat, Polytechnic University of Cartagena (Spain), 2013.

Position

- Membership of the research laboratory "Materials and Nanomaterials Physics and their applications to Environment: LaPhyMNE",
- Membership of the Council of the University of Gabes, Tunisia,

Employment history

Contractual Assistant: September 2007 (Faculty of Sciences in Gabes, TUNISIA)

Assistant Professor: September 2012 (Faculty of Sciences in Gabes, TUNISIA)

Assistant Professor: August 2014 (College of Sciences dept. Physics. Al Imam Mohammad Ibn Saud Islamic University)

Areas of Research

- Synthesis and characterisation of thin films materials for solar cells applications based on nanoparticles.
- Synthesis of nanoparticles for solar photocatalytic applications.
- Study of optical, electrical and magnetic properties of transparent doped zinc oxide thin films elaborated by rf-magnetron sputtering from aerogel nanoparticles.
- Synthesis and analysis of organic-inorganic nanocomposites for variety of applications such as electrodes, advanced catalyst

supports, chromatographic packing, energy storage and gas sensors.

- Synthesis and characterizations of thin films nanocomposites for water desalination applications based on nanoparticles.
- Synthesis of nanoparticles using sol-gel method for different applications:
 - ZnO nanoparticles for ferromagnetism, transparent electrode, membranes.
 - TiO_2 nanoparticles doped by RE or MT for catalysis and optoelectronic,
 - $\text{Zn}_2\text{SiO}_4\text{:Mn}$ and $\text{Zn}_2\text{SiO}_4\text{:V}$ for fluorescence
 - SiO_2 and Al_2O_3 , Y_2O_3 ,... for nanocomposites.

Research Collaboration with Foreign Laboratories

- Research group of Dr C. Barthou, Research Director, First Class at CNRS, "Institut des Nanosciences de Paris (INSP) Universities Paris VI and VII, France",
- Research group of Dr H.J. Von Bardeleben, Research Director, First Class at CNRS, "Institut des Nanosciences de Paris (INSP) Universities Paris VI and VII, France",
- Research group of Dr Salvador A. Gomèz Lopera, Research Director, First Class, laboratory Dispersions and nanoparticles, university of Cartagena in Spain.

Publications

I- Papers

- 1- J. El Ghoul, L. El Mir, Photoconversion from yellow-to-green in vanadium doped zinc silicate nanophosphor material. Superlattices and Microstructures 82 (2015) 551–558.
- 2- J. El Ghoul, L. El Mir, Synthesis by sol–gel process, structural and luminescence of V and Mn doped $\alpha\text{-Zn}_2\text{SiO}_4$. J Mater Sci: Mater Electron, DOI 10.1007/s10854-015-2868-8
- 3- A.S. AL-Hobaib, J. El Ghoul, L. El Mir, Fabrication of polyamide membrane reached by MgTiO_3 nanoparticles for ground water purification. Desalination and Water Treatment, doi: 10.1080/19443994.2015.1025433.

- 4- **J. El Ghoul**, M. Kraini, L. El Mir, Synthesis of Co-doped ZnO nanoparticles by sol-gel method and its characterization. J Mater Sci: Mater Electron. 26 (2015) 2555–2562
- 5- **J. El Ghoul**, M. Kraini, O.M. Lemine, L El Mir, Sol-gel synthesis, structural, optical and magnetic properties of Co-doped ZnO nanoparticles. J Mater Sci: Mater Electron. 26 (2015) 2614–2621.
- 6- Naima Rihane Ben Younes, Salem Amara, Imen Mrad, Imen Ben-Slama, Mustapha Jeljeli, Karim Omri, **Jaber El Ghoul**, Lassaad El Mir, Khemais Ben Rhouma, Hafedh Abdelmelek, Mohsen Sakly. Environ Sci Pollut Res. Published online 10 January 2015.
- 7- K. Omri, I. Najeh R. Dhahri, **J. El Ghoul**, L. El Mir. Effects of temperature on the optical and electrical properties of ZnO nanoparticles synthesized by sol-gel method. Microelectronic Engineering, 128, 5 (2014) 53-58.
- 8- **J. El Ghoul**, K. Omri, S.A. Gómez-Lopera, L. El Mir. Sol-gel synthesis, structural and luminescence properties of MT-doped SiO₂/Zn₂SiO₄ nanocomposites. Optical Materials, 36, 6 (2014) 1034-1039
- 9- **J. El Ghoul**, L. El Mir. Sol-gel synthesis and luminescence of undoped and Mn-doped zinc orthosilicate phosphor nanocomposites. Journal of Luminescence, 148 (2014) 82-88.
- 10- L. El Mir, K. Omri, **J. El Ghoul**, A.S. AL-Hobaib, H. Dahman, C. Barthou. Yellow emission of SiO₂/Zn₂SiO₄:Mn nanocomposite synthesized by sol-gel methods. Superlattices and Microstructures, 65, (2014) 248-255. 2
- 11- **J. El Ghoul**, N. Bouguila, S.A. Gómez-Lopera, L. El Mir. Structural and optical properties of nanoparticles (V, Al) co-doped ZnO synthesized by sol-gel processes. Superlattices and Microstructures, 64, (2013), 451-459.
- 12- K. Omri, **J. El Ghoul**, A. Alyamani, C. Barthou, L. El Mir. Luminescence properties of green emission of SiO₂/Zn₂SiO₄:Mn nanocomposite prepared by sol-gel method. Physica E: Low-dimensional Systems and Nanostructures, 53, (2013), 48-54.
- 13- K. Omri, **J. El Ghoul**, O.M. Lemine, M. Bououdina, B. Zhang, L. El Mir. Magnetic and optical properties of manganese doped ZnO nanoparticles

synthesized by sol–gel technique. Superlattices and Microstructures, 60, **(2013)** 139-147.

- 14- **J. El Ghoul**, K. Omri, A. Alyamani, C. Barthou, L. El Mir. Synthesis and luminescence of SiO₂/Zn₂SiO₄ and SiO₂/Zn₂SiO₄:Mn composite with sol-gel methods. Journal of Luminescence, 138, **(2013)** 218-222.
- 15- Salem Amara, Imen Ben Slama, Karim Omri, **Jaber EL Ghoul**, Lassaad EL Mir, Khemais Ben Rhouma, Hafedh Abdelmelek and Mohsen Sakly. Effects of nanoparticle zinc oxide on emotional behavior and trace elements homeostasis in rat brain. Toxicology and Industrial Health, 12 **(2013)**.
- 16- Imen BEN SLAMA, Salem AMARA, Naima RIHANE BEN YOUNES, Imen MRAD, Karim OMRI, **Jaber EL GHOUL**, Lassaad EL MIR, Khemais BEN RHOUMA, Hafedh ABDELMELEK and Mohsen SAKLY. Effects of ZnO nanoparticles and ZnCl₂ solution on rat liver and kidney. Nanotech USA 2013.
- 17- Naima RIHANE BEN YOUNES, Salem AMARA, Imen BEN SLAMA, Imen MRAD, Karim OMRI, **Jaber EL GHOUL**, Lassaad EL MIR, Mustapha JELJELI, Khemais BEN RHOUMA, Hafedh ABDELMELEK and Mohsen SAKLY. Effects of Titanium Dioxide Nanoparticles (TiO₂) on Behavioral Parameters of Rats. Nanotech USA 2013.
- 18- **J. El Ghoul**, K. Omri, L. El Mir, C. Barthou and S. Alaya. Sol-gel synthesis and luminescent properties of SiO₂/Zn₂SiO₄ and SiO₂/Zn₂SiO₄:V composite materials. Journal of Luminescence, 132, **(2012)** 2288-2292.
- 19- **J. El Ghoul**, C. Barthou, L. El Mir. Synthesis, structural and optical properties of nanocrystalline vanadium doped zinc oxide aerogel. Physica E: Low-dimensional Systems and Nanostructures, 44, 9 **(2012)** 1910-1915
- 20- **J. El Ghoul**, C. Barthou, L. El Mir. Synthesis by sol–gel process, structural and optical properties of nanoparticles of zinc oxide doped vanadium. Superlattices and Microstructures, 51, 6 **(2012)** 942-951.
- 21- **J. El Ghoul**, C. Barthou, M. Saadoun and L. El Mir. Optical characterization of SiO₂/Zn₂SiO₄:V nanocomposite obtained after the incorporation of ZnO:V nanoparticles in silica host matrix. Journal of Physics and Chemistry of Solids; 71 **(2010)** 194-198.

- 22- **J. El Ghoul**, C. Barthou, M. Saadoun and L. El Mir. Synthesis and optical characterization of SiO₂/Zn₂SiO₄:Mn nanocomposite. Physica B: Condensed Matter; 405 (2010) 597-601.
- 23- Z. Ben Ayadi, L. El Mir, **J. El Ghoul**, K. Djessas and S. Alaya. Structural and optical properties of calcium-doped zinc oxide sputtered from nanopowder target materials. Int. J. Nanoelectronics and materials; 3 (2010) 87-97.
- 24- L. El Mir, Z. Ben Ayadi, H. Rahmouni, **J. El Ghoul**, K. Djessas, H.J. von Bardeleben. Elaboration and characterization of Co doped, conductive ZnO thin films deposited by radio-frequency magnetron sputtering at room temperature. Thin Solid Films; 517 (2009) 6007-6011.
- 25- **J. El Ghoul**, A. Alaya. C. Barthou, S. Alaya, M. Saadoun and L. El Mir. Elaboration and caracterisation of (V,Al) co-doped nanosized zinc oxyde aerogel. International Journal of Nano and Biomaterials; 2 (2009) 273-278.
- 26- L. ElMir, **J. El Ghoul**, C. Barthou, M. Saadoun and S. Alaya. In situ synthesis of Zn₂SiO₄:V obtained by incorporation of ZnO:V. nanoparticles in silica host matrix. International Journal of Nanoparticles; 2 (2009) 291-299.
- 27- L. El Mir, **J. El Ghoul**, S. Alaya, M. Ben Salem, C. Barthou, H. J. von Bardeleben. Synthesis and luminescence properties of vanadium doped nanosized zinc oxide aerogel. Physica B: Condensed Matter; 403 (2008) 1770-1774.

II- Communications

- 1- Sol-gel synthesis, optical and magnetic properties of vanadium doped ZnO nanoparticles; J. El Ghoul and **L. El Mir**; E-MRS, May 26-31, 2014 Lille, France.
- 2- Performance of polyamide membrane reached by ZnO nanoparicles for ground water purification; El Ghoul, A. S. AL-Hobaib, and **L. El Mir**; E-MRS, May 26-31, 2014 Lille, France
- 3- A. S. AL-Hobaib, **J. El Ghoul** and L. El Mir. Performance of polyamide membrane reached by ZnO nanoparicles for ground water purification. The 4th Maghreb conference on Desalination and Water Treatment, December 2013.
- 4- A. S. AL-Hobaib, **J. El Ghoul** and L. El Mir. Fabrication of polyamide membrane reached by MgTiO₃ particles for ground water purification. The 4th Maghreb conference on Desalination and Water Treatment, December 2013.

- 5- A. S. AL-Hobaib, **J. El Ghoul** and L. El Mir. Synthesis and characterization of modified membrane reached by BaTiO₃ particles for improving ground water quality. The 4th Maghreb conference on Desalination and Water Treatment, December 2013.
- 6- **J. El Ghoul**, K. Omri, N. Bouguila, S. A. Gomez-Lopera and L. El Mir. Synthesis, structural, optical and magnetic properties of nanoparticles Co-doped Zinc Oxide. International Conference on Magnetic and Superconducting Materials, September 2013.
- 7- **J. El Ghoul**, K. Amri, C. Barthou, M. Saadoun, and L. El Mir. Optical caracterisation of SiO₂/Zn₂SiO₄:Mn nanocomposite obtained after the incorporation of ZnO :Mn nanoparticles in silica host matrix. 7^{ème} journées Maghreb-Europe sur les matériaux et leurs applications aux dispositifs capteurs, MADICA 2010, TABARKA 20-22 Octobre- TUNISIE.
- 8- **J. El Ghoul**, M. Saadoun, C. Barthou, and L. El Mir. Effect of thermal treatment on luminescence properties of Y₂O₃:Tb aerogel nanoparticles. 2^{ème} colloque internationale sur des matériaux pour des applications électroniques, IMMEA 2009, HAMMAMET, 8-10 MAI 2009- TUNISIA.
- 9- **J. El Ghoul**, M. Saadoun, C. Barthou, and L. El Mir. Effect of thermal treatment on luminescence properties of Y₂O₃:Tb aerogel nanoparticles. VIII^{ème} Symposium International Environnement, Catalyse et Génie des Procédés; DJERBA-TUNISIE Avril 2009.
- 10- **J. El Ghoul**, L. El Mir, Z. Ben Ayadi, S. Alaya, M. Ben Salem, C. Barthou, H. J. von Bardeleben. Elaboration and characterization of vanadium doped nanosized zin oxide aerogel. 5^{ème} Colloque Arabe de Sciences des Matériaux à Gabès, Tunisie 2007.
- 11- L. El Mir, **J. El Ghoul**, S. Alaya, M. Ben Salem, C. Barthou, H. J. von Bardeleben 2007. Synthesis and luminescence properties of vanadium doped nanosized zinc oxide aerogel. E-MRS 2007 Spring Meeting, Strasbourg, France.
- 12- L. El Mir, Z. Ben Ayadi, H. Hamrouni, **J. El Ghoul**, K. Djessas, H. J. von Bardeleben. Elaboration and characterization of ZnO:Co thin films deposited by rf-magnetron sputtering from aerogel nanopowder target material. E-MRS 2008 Spring Meeting, Strasbourg, France.