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COMPETENCES DOMAINES

Education: Teaching Physics and chemistry for university, college and high school levels: Classical and quantum mechanics, thermodynamic, nuclear physics relativity, wave and vibration, semi-conductor, optics and optoelectronic, physics of solid, Matter and light interaction, physical and chemical matter synthesis

Physics of material:

- ❖ Electronic and structural properties, interaction material-radiation, synchrotron radiation, semi-conductor, catalysis, electro-optic wave-guide...
- ❖ Material: Nanomaterials for energy (Si, mc-Si, TCO), thin films elaborated by the CVD-Pyrosol process, Plasma Pulsed laser deposition, Nano-materials, polymer, photonic material...
- ❖ Microfabrication and characterization of Photonic Material and Tuneable active Wave-guide for new generations of optical Telecommunication compounds: photolithography, etching, optical test...

X ray radiation analysis:

- ***XAFS (X-ray Absorption Fine structure)***
 - ❖ Analysis per XAS (EXAFS et XANES):
 - ❖ Use synchrotron radiation tunnel « Third generation (ESRF-France).
 - ❖ ***X ray diffraction on thin films and powders***
 - ❖ ***Wide Angle X ray Scattering (WAXS) for the analysis of non crystallised material and liquid solution***
- ***X-ray Photoelectron Spectroscopy (XPS)***

Electronic Microscopy (TEM-SEM):

- ❖ Conventional: structural and topological analysis, electronic diffraction.
- ❖ Energy Electron loss Spectroscopy (EELS): Chemical analysis, structural and electronic (ELNES, EXELFS).

PROFESSIONAL EXPERIENCE

July 2017: ranked to full Professor (Tunisian Ministry of Higher Education and Scientific Research)

January 2014: Associate professor, department of applied physics and astronomy, University of Sharjah, UAE.

August 2013-January 2014: Head of General Education department, Emirates College of Technology, Abu Dhabi, United Arab Emirates

September 2012- January 2014: Associate professor, Emirates College of Technology, Abu Dhabi, United Arab Emirates

-Tasks :

-Teaching:

Physics: *Classical mechanics, thermodynamic, optical wave*

Chemistry: *Matter and change, atomic structure, chemical reaction*

- **Program coordinator of Natural science courses** (physics, chemistry, biology and man and environment)

- Portfolio assessor

Mai 2010-september 2012: Associate professor at the research and technology centre of energy, Borj cedria technopole, Tunisia

- ✓ Research in the field of nano-material for energy and photovoltaic application
- ✓ Master and PhD student supervising

2006-2009: Assistant professor of physics at the Faculty of science of Bizerte – Tunisia

- ✓ Duties : courses and Lab professor of Waves and vibrations (master of physical science), thermodynamics, Relativity, wave optics, opto-electronic, classical mechanics
- ✓ Integrated course in nuclear physics, Flying school of BorjElamri, the first year Aeronautical Systems

2005-2006 Head of the photonic group at Adtek PhotomaskInc (Montreal-Canada)
Micro-fabrication and development of fast reconfigurable photonic compounds

2001-2005 Associate Researcher at the National Institute of Scientific Research (Varenes – Canada), Plasma laser deposition and study of electro-optic and photonic materials for tuneable waveguide and optical filter application

2000-2001 Postdoctoral research scientist at the Centre of Material Elaboration and Structural Studies (CEMES), laboratory attached to Centre National de recherche scientifique (France).

Subjects: Elaboration and structural studies (TEM, EELS, WAXS, EXAFS...) of metallic nano-colloidal (Pd-Sn) used for the catalysis of polymer metallization and printed circuit

1996-1998 Lecture at the national institute of polytechnic of Grenoble (France)
Instrumentation Lab, Introduction to measurement, basic physical phenomena of electricity, magnetism, materials, heat exchange.

EDUCATION

2010 Diploma of university habilitation (physics), Tunisia

1996 - 1999: Doctorate (Ph.D. thesis) in physics (material sciences) at the National Institute of polytechnic (Grenoble-France), *the highest level: with felicitations.*

- Subject:** thin films of tin dioxide doped platinum or palladium and used as gas sensors: *in situ* analysis of the correlation between the electrical reply and the behaviour of the metallic aggregates.
- 1996:** DEA (Diploma of Advanced Studies) in physic, University JOSEF FOURRIER, Grenoble, France.
- 1995:** Master in chemical physics, faculty of sciences, University of Monastir, Tunisia.

TRAINING AND WORKSHOP PARTICIPATION

- 2016:** Workshop, Advanced materials, Qatar University, 2-3 Mai
- 2015:** Workshop, **Administrative rules and regulations training sessions**, University of Sharjah, Sharjah (UAE)
- 2013:** Workshop, **Presentation skills**, Emirates College of Technology ECT, Abu Dhabi (UAE)
- 2012:** Workshop, **Strategic planning**, ECT 2012, Abu Dhabi (UAE)
- 2012:** Workshop, **Effective learning**, ECT 2012, Abu Dhabi (UAE)
- 1998:** Workshop, **The Higher European Research course for users of Large Experimental Systems in the ESRF (European Synchrotron Radiation Facilities)**, Grenoble-France.
- 1995:** Training course in the Tunisian company for chemical production

STUDENTS SUPERVISION

- Nadia Janene: **PhD in condensed materials science**: mc-Si passivation by the way of dual treatment based on porous Si and TiO₂ coating (**defended April 201[^]**).
- Moez Salem: **PhD in Materials Sciences**: Surface Si treatment for photovoltaic applications (**defended Mars 2016**)
- 2011 - 2012, Salem Moez: **Master in physics**: Effect of Al₂O₃ passivation on the opto-electronic properties of multicristalline Si .
- 2011 - 2012, Trabelsi Khaled: **Master in physics**: Photocatalytic effect of TiO₂ thin films deposited by pulsed laser deposition.
- 2011 - 2012, Saidi Houda: **Master in physics: Optical properties of BFO thin films**
- 2007 - 2008, Anouar Hajaji: **Master in condensed material science**: optical and microstructural study of Pd/Pd doped tin oxide thin film.
- 2008 - 2009, Rami Abdulmoula: **Master in instrumentation**: optical sensor gas realization.
- 2005 - 2006, Fulvio Cusimano: **Master in science of energy and materials**: Investigation of the optical properties of BST ferroelectric thin films for magnet-optic devices and waveguide applications.
- 2005 - 2006, Marcello Ferrera: **Master in science of energy and materials**

UNIVERSITY AND COMMUNITY SERVICE

- **Workshop organisation:** 1 st Canada-UAE-Japan Workshop: Functional Materials: Synthesis, characterisation and application. University of Sharjah, 29-31 Jan 2017.
- Participation to the UOS Open Day 2016.
- Participation to the UOS Open Day 2015.
- Referee for the science competition during the Third Sharjah Science Festival (February 2014)
- Member of the applied physics Master program preparation committee.
- Head of the Department webpage committee
- Member of the Accreditation Committee of the Department of Applied Physics and Astronomy.
- Member of the Research Committee of the Department of Applied Physics and Astronomy.
- Member of the college Academic Advisory Committee of the College of Sciences.
- Course leader: I was coordinating a number of course files each semester: revising the handouts, putting exams and model answers and collecting student's samples.

AWARDS AND HONORS

Annual incentive award for Scientific research University of Sharjah 2017/2018

Venus International Faculty Awards-VIFA 2018

Visiting professor at the National Institute of scientific research (Quebec University-Canada). 2008, 2010 and 2011.

Visiting professor at the National Institute of polytechnic of Grenoble (France). November 2010.

Scholarship of excellence: Tunisia 1996 (Major promotion for 4 years)

Scholarship of excellence: France-Rhone Alps Region 1998

Scholarship of excellence: Industrial Fellowship NSERC – Canada 2004

PhD dissertation nominated to be among the Best 20 % of the defended thesis in France (for the year 1999).

Leader of many international projects collaboration (Canada, Morocco, Tunisia)

PROJECTS GRANTS

Covid 19-Project: Development of highly sensitive and fast detection technique for Corona Virus (COVID19) based on Metal Nanoparticle decorated Silicon Nanowires/TiO₂ nanocomposite. funded by the University of Sharjah, 2020-2021

Collaborative project 2019-2021: Development of Graphene-doped Silicon Nanowires for room temperature polluting gas sensors and air quality control (200,000 AED): funded by Sharjah research academy and the University of Sharjah.

Competitive project 2016-2018: Novel metal oxide/nanoporous composite coatings for enhancing silicon solar cells photoconversion and for high sensitivity gas sensors (80,000 AED): funded by the University of Sharjah, 2019-2021))

Seed project 2015-2016: Study of nanocomposite materials based on Al₂O₃-TiO₂/Porous Si for gas sensing and photovoltaic applications.

Referee for the following journal

Journal of Lightwave technology

Sensors and Actuators

Material letters

International Journal of Biochemistry and Biotechnology

Journal of Materials Science: Materials in Electronics

Journal of Nanostructure in Chemistry

Journal of semi-conductor science technology

Ceramics International Journal

Nano Journal

Materials Science in Semiconductor Processing

Super lattices and microstructures

Nanotechnology

Material research express

Editorial Board of:

- ✓ The international journal on advances on systems and measurements.
- ✓ Madridge Journal of Nanotechnology & Nanoscience
- ✓ SCIREA Journal of Materials

Member of the program committees of:

- ✓ Sensors devices conference
- ✓ International Renewable Energy Congress (IREC-2018)
- ✓ Advisory Committee Chair for The 3rd International Conference on Green Energy and Environmental Engineering
- ✓ Scientific committee for Tunisia-Japan Symposium 2014 R&D on Energy and Materials Science for Sustainable Society

LANGUAGES

Arabic, English, French

COMPUTER EXPERIENCE

PC, Mac, Office (Word, Excel, PowerPoint), Windows, PhotoShop, Kaleida-graph, origin

Scientific programs: EXAFS, Gatan ELP, LAXS, Casa XPS, Femlab, optiwave, ...

Publications

1. **M. Gaidi**, M. Labeau, B. Chenevier and J. L. Hazemann
In-situ EXAFS Investigation of the Catalyst role of Metallic Nanoparticles
Selected ESRF HighLights 1996/1997, 83-84.
2. **M. Gaidi**, M. Labeau, B. Chenevier and J. L. Hazemann
In-situ EXAFS Analysis of the Local Environment of Pt Particles Incorporated in Thin Films of SnO₂ Semi-Conductor oxide used as gas-sensors.
Sensors and Actuators B48 (1998) 277-284.
3. I. Matko, **M. Gaidi**, J. L. Hazemann, B. Chenevier and M. Labeau
Electrical properties under polluting gas (CO) of Pt and Pd doped polycrystalline SnO₂ thin films : Analysis of the metal aggregate size effect.
Sensors and Actuators. B59 n° 2-3 (1999) 210-225.
4. **M. Gaidi**, B. Chenevier and M. Labeau
Electrical properties evolution under reducing gaseous mixtures (H₂, H₂S, CO) of SnO₂ thin films doped with Pd/Pt aggregates and used as polluting gas sensors.
Sensors and actuators B62 n°1 (2000) 43-50.
5. **M. Gaidi**, J. L. Hazemann, I. Matko, B. Chenevier, M. N. Rumyantseva, A. M. Gaskov, and M. Labeau, Role of Pt Aggregates in Pt/SnO₂ thin Films Used as Gas Sensors : Investigations of the Catalytic Effect. *Journal of the Electrochemical Society*, 147 (8) (2000) 3131-3138.
6. I. Matko, **M. Gaidi**, B. Chenevier, A. Charai , W. Saikaly and M. Labeau
Pt Doping of SnO₂ Thin Films: A Transmission Electron Microscopy Analysis of the Porosity Evolution, *Journal of the Electrochemical Society*, 149 (8) (2002), pp. H153-H158
7. M. Kulishov, X. Daxhelet, **M. Gaidi** and M. Chaker
Electronically reconfigurable superimposed waveguide long-period grating, *J. Opt. Soc. Amer.* A8307 (2002), pp.1632 - 1648
8. P. Lecante, Y. Kihn, H. Dexpert, **M. Gaidi**, O. Holderer, G. Fuchs et M. Bertucci,
Caractérisation de nano-colloïdes bimétalliques Pd-Sn par techniques de rayons X et sondes électroniques, *Journal de Physique IV (Proceedings) Vol. 12, Pr 6, July 2002*, p 481
9. **M. Gaidi**, L. Stafford, M. Chaker, J. Margot and M. Kulishov,
Growth and patterning of strontium-titanate-oxide thin films for optical devices Applications, *MRS proceeding*, 817 (2004) L6.16.

10. **M.Gaidi**, A. Amassian, M. Chaker, L. Martinu and M. Kulishov,
Pulsed Laser Deposition of PLZT Thin Films: Structural and Optical Characterization
Journal of applied surface science 226/4 (2004) pp. 347-354
11. M. Kulishov, X. Daxhelet, **M. Gaidi** and M. Chaker,
Transmission spectrum reconfigurable in a long-period gratings electrically induced in pockels
type media with the help of a periodical electrode structure, Journal of Lightwave Technology,
vol 22 n ° 3 (2004) 923-933.
12. L. Stafford, **M. Gaidi**, M. Chaker, O. Langlois, J. Margot, F. Schiettekatte and P. Wei,
"Influence of the microstructure on the sputter-etching characteristics of strontium-titanate-
oxide thin films", Appl. Phys. Letters vol 84 n ° 14 (2004) 2500-2502.
13. **M.Gaidi**, A. Amassian, L. Stafford, M. Chaker, L. Martinu, J. Margot and M. Kulishov,
Correlation between optical and microstructural properties of SrTiO₃ thin films grown on
silicon by pulsed laser deposition, J. Mat. Res. Vol 20 n°1 (2005) 68-74.
14. **M.Gaidi**, L. Stafford, M. Chaker, J. Margot, M. Kulishov and R. Morandotti,
Microfabricated SrTiO₃ ridge waveguides, Appl. Phys. Lett. 86, 221106 (2005)
15. Paul F. Ndione, **Mounir Gaidi**, Christophe Durand, Roberto Morandotti and Mohamed
Chaker, Epitaxial CBN growth for fast electro-optic tunable devices. Proc. SPIE Int. Soc.
Opt. Eng. **5970**, 597011 (2005)
16. A. Amassian, **M. Gaidi**, M. Chaker and L. Martinu,
Optical Depth Profiling of STO and Electro-Optic PLZT Multilayer Structures For Active
Waveguide Applications, J. Vacc. Sci. Tech. A, **24** (1) (2006) 55.
17. **M. Gaidi**, M. Labeau, B. Chenevier and J. L. Hazemann
In situ simultaneous XAS and electrical characterizations of Pt-doped tin oxide thin film
deposited by pyrosol method for gas sensors application, Sensors and Actuators B, pp. 313-
315 (2006).
18. L. Stafford, O. Langlois, J. Margot, **M. Gaidi** and M. Chaker,
Influence of the positive ion composition on the ion-assisted chemical etch yield of SrTiO₃
films in Ar/SF₆ plasmas, Journal of Vacuum Science and Technology A: Vacuum, Surfaces
and Films 25 (3), pp. 425-431 (2007)
19. A. Missaoui, L. Beji, **M. Gaidi**, Z. Harrabi, H.B. Ouada, A. Bouazizi,
Structural characterisation of CdS layers deposited on porous p-type GaAs, Microelectronics
Journal 38 (1), pp. 96-101 (2007)

20. **M. Gaidi**, M. Chaker, P.F. Ndione, R. Morandotti, B. Bessais,
Microstructural and optical properties of Ba_{0.5}Sr_{0.5}TiO₃ thin film deposited by pulsed laser deposition for low loss waveguide applications, Journal of Applied Physics 101 (6), art. no. 063107 (2007).
21. Ferrera, M., Helsten, R., Razzari, L., Ndione, P.-F., **Gaidi, M.**, Chaker, M., Morandotti, R.
Evaluation of the electro-optic response of novel calcium barium niobate thin films (2007)
Conference Proceedings of the International Symposium on Signals, Systems and
Electronics, art. no. 4294517., ISSSE '07, pp 479-480 (2007).
22. R. Helsten, L. Razzari, M. Ferrera, P. F. Ndione, **M. Gaidi**, C. Durand, M. Chaker and R.
Morandotti, Pockels Response in Calcium Barium Niobate Thin Films, Appl. Phys. Lett.
91, 261101 (2007).
23. Missaoui, A., Beji, L., Gaidi, M., Bouazizi, A.
Study of band-edge emission in CdS layers grown on p-type porous GaAs substrates (2007)
ICTON-MW'07 - International Conference on Transparent Optical Networks "Mediterranean
Winter" 2007 - Conference Proceedings, art. no. 4446972, .
24. Paul F. Ndione, **Mounir Gaidi**, Christophe Durand, Mohamed Chaker, Roberto Morandotti
and Grégory Rioux, Structural and optical properties of epitaxial Ca_xBa_{1-x}Nb₂O₆ thin films
grown on MgO by pulsed laser deposition, JOURNAL OF APPLIED PHYSICS 103, 033510
(2008).
25. Mounir Gaidi, Anouar Hajjaji, My Ali El Khakani, Brenard Chenevier, Michel Labeau, and
Brahim Bessais, Optical Properties Tuning of SnO₂ Films by Metal Incorporation (Pt,Pd):
Correlation with Microstructure Change, Japanese Journal of Applied Physics 48 (2009)
072501.
26. Paul F. Ndione, Marcello Ferrera, David Duchesne, Luca Razzari, **Mounir Gaidi**, Mohamed
Chaker and Roberto Morandotti, Hybrid integration of Ca_{0.28}Ba_{0.72}Nb₂O₆ thin film
electro-optic waveguides with silica/silicon substrates, Optics express 17 n°17 (2009) 15128.
27. A. Labidi, **M.Gaidi**, J. Guérin, A. Bejaoui, M. Maaref and K. Aguir, Alternating current
investigation and modeling of the temperature and ozone effects on the grains and the grain
boundary contributions to the WO₃ sensor responses, Thin Solid Films, Volume 518, Issue 1,
2 November 2009, Pages 355-361.

28. **M. Gaidi**, A. Hajjaji, R. Smirani, B. Bessais and M.A. El Khakani, Structure and photoluminescence of ultrathin films of SnO₂ nanoparticles synthesized by means of pulsed laser deposition, *Journal of Applied Physics* 108 (2010) 063537.
29. M. Ben Rabha, S. B. Mohamed, W. Dimassi, **M. Gaidi**, H. Ezzaouia and B. Bessais, Optoelectronic enhancement of monocrystalline silicon solar cells by porous silicon-assisted mechanical grooving, *physica status solidi (c)*, 8 (2011) 887–890.
30. M. Ghrib, **M. Gaidi**, T. Ghrib, N. Khedher, M. Ben Salam, H. Ezzaouia, Morphological and optical properties changes in nanocrystalline Si (nc-Si) deposited on porous aluminum nanostructures by plasma enhanced chemical vapor deposition for Solar energy applications *Applied Surface Science*, Volume 257, Issue 21, 15 August 2011, Pages 9129-9134
31. A. Hajjaji, **M. Gaidi**, B. Bessais, M.A.E. Khakani, Effect of Cr incorporation on the structural and optoelectronic properties of TiO₂:Cr deposited by means of a magnetron co-sputtering process, *Applied Surface Science*, 257 (24), (2011) pp. 10351-10357.
32. A. Labidi, A. Bejaoui, H. Ouali, F. Chaffar Akkari, A. Hajjaji, **M. Gaidi**, M. Kanzari, B. Bessais, M. Maaref, Dry air effects on the copper oxides sensitive layers formation for ethanol vapor detection, *Applied Surface Science*, Volume 257, Issue 23, 15 September 2011, Pages 9941-9945
33. Ben Naceur, J., **Gaidi, M.**, Bousbih, F., Mechiakh, R., Chtourou, R., Annealing effects on microstructural and optical properties of Nanostructured-TiO₂ thin films prepared by sol-gel technique, *Current Applied Physics*, 12 (2), (2012) pp. 422-428.
34. M. Ghrib, **M. Gaidi**, N. Khedher, T. Ghrib, M. Ben Salem, H. Ezzaouia, Structural and optical properties study of nanocrystalline Si (nc-Si) thin films deposited on porous aluminum by plasma enhanced chemical vapor deposition, *Applied Surface Science*, Volume 257, Issue 9, 15 February 2011, Pages 3998-4003.
35. Rabha, M.B., Dimassi, W., **Gaidi, M.**, Ezzaouia, H., Bessais, B., *Combination of silicon nitride and porous silicon induced optoelectronic features enhancement of multicrystalline silicon solar cells*, *Physica Status Solidi (C) Current Topics in Solid State Physics*, 8 (6), (2011) pp. 1874-1877.
36. Ben Rabha, M., Mohamed, S.B., Dimassi, W., **Gaidi, M.**, Ezzaouia, H., Bessais, B., *Reduction of absorption loss in multicrystalline silicon via combination of mechanical grooving and porous silicon*, *Physica Status Solidi (C) Current Topics in Solid State Physics*, 8 (3), (2011) pp. 883-886.
37. Ben Rabha, M., Mohamed, S.B., Dimassi, W., **Gaidi, M.**, Ezzaouia, H., Bessais, B., Optoelectronic enhancement of monocrystalline silicon solar cells by porous silicon-assisted mechanical grooving, *Physica Status Solidi (C) Current Topics in Solid State Physics*, 8 (3), (2011) pp. 887-890.

38. A. Hajjaji, A. Labidi, M. **Gaidi**, M. ben Rabha, B. Bessais, M.A.E. . Khakani, Structural, Optical and Sensing Properties of Cr-Doped TiO₂ Thin Films, *Sensor Lett.* 9, (2011) 1697-1703.
39. A. Hajjaji, M. Ben Rabha, N. Janene, **M. Gaidi**, B. Bessais, M.A. El Khakani, Minority carrier lifetime enhancement in multicrystalline silicon by means of a dual treatment based on porous silicon and sputter-deposition of TiO₂:Cr passivation layers, *Applied Surface Science*, Volume 258, Issue 20, 1 August 2012, 8046–8048.
40. A. Hajjaji , M. Ben Rabha, N. Janene , W. Dimassi , B. Bessais, M. A. El Khakani, **M. Gaidi**, Effect of dual treatment based on porous silicon and sputter-deposited TiO₂ doped Cr film on the optoelectronic properties of monocrystalline Si, *Sci. Lett. J.* 2012, 1: 12
41. N. Janene, A. Hajjaji, M. Ben Rabha, B. Bessais, M. A. El Khakani, **M. Gaidi**, Effect of double treatment based on porous Si and TiO₂ passivation on the optoelectronic properties of multicrystalline silicon substrates, *Sci. Lett. J.* 2012, 1: 13
42. [M. Ben Rabha, S. Belhadj Mohamed, A. Hajjaji, W. Dimassi, M. Hajji, S. Aouida, **M. Gaidi**, M. Bouaicha, and B. Bessais, Minority carrier lifetime enhancement in multicrystalline silicon, *The European Physical Journal Applied Physics* 57-2 (2012) 21302.
43. M. Ben Rabha, M. Hajji, S. Belhadj Mohamed, A. Hajjaji, **M. Gaidi**, H. Ezzaouia, and B. Bessais, Stain-etched porous silicon nanostructures for multicrystalline silicon-based solar cells, *Eur. Phys. J. Appl. Phys.* (2012) 57: 21301
44. M. Jaouadi, W. Dimassi, **M. Gaidi**, R. Chtourou, H. Ezzaouia, Nanoporous silicon membrane for fuel cells realized by electrochemical etching, *Applied Surface Science*, Volume 258, Issue 15, 15 May 2012, Pages 5654-5658.
45. M. Ben Rabha, M. Salem, M.A. El Khakani, B. Bessais, **M. Gaidi**, Monocrystalline silicon surface passivation by Al₂O₃/porous silicon combined treatment, *Materials Science and Engineering: B*, Volume 178, Issue 9, 15 May 2013, Pages 695-697.
46. N. Janene, A. Hajjaji, M. Ben Rabha, M. A. El Khakani, B. Bessais, and **M. Gaidi**, Influence of porous silicon passivation layer and TiO₂ coating on the optoelectronic properties of multicrystalline Si substrate, *Phys. Status Solidi C*, 1–4 (2012) 2141–2144.
47. M. Jaouadi, **M. Gaidi**, H. Ezzaouia, Effect of LiBr pore-filling on morphological, optical and electrical properties of porous silicon membrane, *Superlattices and Microstructures*, Volume 54, February 2013, Pages 172-180.
48. M. Salem, M. Ben Rabha, B. Bessais, M.A. Elkhakani, **M. Gaidi**, Novel silicon surface passivation by porous silicon combined with an ultrathin Al₂O₃ film. *Journal of Materials Science: Materials in Electronics*, 24-12 (2013) 5035-5039.

49. W. Zaghdoudi, **M. Gaidi**, and R. Chtourou, Microstructural and Optical Properties of Porous Alumina Elaborated on Glass Substrate, *Journal of Materials Engineering and Performance*, March 2013, Volume 22, Issue 3, pp 869-874.
50. Anouar Hajjaji, Ater Atyaoui, Khaled Trabelsi, Mosbah Amlouk, Latifa Bousselmi, Brahim Bessais, My Ali El Khakani and **Mounir Gaidi**, Cr-Doped TiO₂ Thin Films Prepared by Means of a Magnetron Co-Sputtering Process: Photocatalytic Application, *American Journal of Analytical Chemistry*, 2014, 5, 473-482.
51. M. Naouar, I. Ka, **M. Gaidi**, H. Alawadhi, B. Bessais, M.A. El Khakani, Growth, structural and optoelectronic properties tuning of nitrogen-doped ZnO thin films synthesized by means of reactive pulsed laser deposition, *Materials Research Bulletin* 57 (2014) 47–51.
52. Moez Salem, Mondher Ghrib, Brahim Bessais, Hussain Alawadhi and **Mounir Gaidi**, Surface passivation of multicrystalline silicon wafers by porous silicon combined with an ultrathin nanoparticles aluminum coating film, *J Mater Sci: Mater Electron*, 25 (2014) 4326-4332.
53. Ghannam, H, Zakaria, O.E.H, Yamlahi Alami, Z, Addou, M, Chahboun, A, Salem, M, Gaidi, M, Simulation of hydrophobic surfaces: A case study of ZnO thin film, *Proceedings of 2014 International Renewable and Sustainable Energy Conference, IRSEC 2014*, 12 March 2014, Article number 7059844, Pages 711-715
54. Anouar Hajjaji, Khaled Trabelsi, Atef Atyaoui, **Mounir Gaidi**, Latifa Bousselmi, Brahim Bessais, My Ali El Khakani, Photocatalytic activity of Cr-doped TiO₂ nanoparticles deposited on porous multicrystalline silicon films, *Nanoscale Research Letters* (2014), 9:543
55. N Somrani, A Maaloul, H Saidi, L Stafford, **M Gaidi**, Microstructural and optical properties tuning of BiFeO₃ thin films elaborated by magnetron sputtering, *Journal of Materials Science: Materials in Electronics* (2015) 26 (5), 3316-3323.
56. N. Janene, M. Salem, M. Ben Rabha, M. A. El Khakani, B. Bessais, H. Alawadhi, **M. Gaidi**, TiO₂/porous silicon nanocomposite passivation coating for mc-Si wafers, *Journal of Materials Science: Materials in Electronics: Volume 26, Issue 3* (2015), Page 1585-1590
57. M. Salem, Z. Yamlahi Alami, B. Bessais, A. Chahboun, M. Gaidi, Structural, optical and electrical properties of ZnO nanoparticles deposited on porous silicon substrates, *journal of nanoparticles research* March 2015, 17 (2015) 137.
58. Z.Yamlahi Alami, M. Salem, **M. Gaidi**, J. Elkhakhami, Effect Of Zn Concentration On Structural And Optical Proprieties Of Zno Thin Films Deposited By Spray Pyrolysis, *Advanced Energy: An International Journal (AEIJ)*, Vol. 2, No. 4, October 2015

59. Anis Allagui, Hussain Alawadhi, Mustafa Alkaaby, **Mounir Gaidi**, Khalid Mostafa and Yacoub Abdulaziz, Mott–Schottky analysis of flower-like ZnO microstructures with constant phase element behaviour, *PHYSICA STATUS SOLIDI (A)*, 213-1- (2016), 139-145
60. N. Janene, N. Ghrairi, A. Allagui, H. Alawadhi, M. A. El Khakani, B. Bessais, **M. Gaidi**, Optoelectronic properties of a TiO₂/PS/mc-Si heterojunction based solar cell, *Applied Surface Science*, Volume 368, 15 April 2016, Pages 140-145.
61. M. Salem, S. Akir, T. Ghrib, K. Daoudi, **M. Gaidi**, Fe-doping effect on the photoelectrochemical properties enhancement of ZnO films, *Journal of Alloys and Compounds*, Volume 685, 15 November 2016, Pages 107-113
62.] K. Trabelsi, A. Hajjaji, I. Ka, **M. Gaidi**, B. Bessais and M. A. El Khakani, Optoelectronic and photocatalytic properties of in situ platinum-doped TiO₂ films deposited by means of pulsed laser ablation technique, *Journal of Materials Science: Materials in Electronics* February 2017, Volume 28, Issue 4, pp 3317–3324.
63. M. Salem, S. Akir, I. Massoudi, Y. Litaïem, **M. Gaidi** and K. Khirouni, Enhanced photoelectrochemical and optical performance of ZnO films tuned by Cr doping, *Appl. Phys. A* (2017) 123: 243.
64. Laatar, F, Harizi, A, Ghrib, M, Hassen, M, Khirouni, K, **Gaidi, M.** and Ezzaouia, H, Rapid thermal annealing effect on the microstructural and optical properties of nc-Si embedded in porous anodic alumina, *Journal of Alloys and Compounds*, Volume 709, 30 June 2017, Pages 487-495.
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