



# Hassen Dakhlaoui

Assistant Professor

## Personal Data

Nationality | Tunisia

Date of Birth | 03/02/1974

Department | physics

Official IAU Email | hbaldkhlaen@uod.edu.sa

## Language Proficiency

Language	Read	Write	Speak
Arabic	Excellent	Excellent	Excellent
English	Excellent	Excellent	Excellent
Others French	Excellent	Excellent	Excellent

## Academic Qualifications (Beginning with the most recent)

Date	Academic Degree	Place of Issue	Address
2006	PhD	University of Tunis Almanar	Tunis
2002	Master	University of Tunis Almanar	Tunis
1998	Diploma	University of Carthage	Tunis

## PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

<b>PhD</b>	Theoretical study of electronic properties of diluted magnetic semiconductors Quantum wells
<b>Master</b>	Theoretical study of the propagation of the heat wave in a pyroelectric sensor

## Professional Record: (Beginning with the most recent)

Job Rank	Place and Address of Work			Date
Assistant professor	Department of physics	College of Science	IAU (KSA)	2012-present
Assistant professor	Department of physics	Faculty of Science Bizerte	University of carthage (Tunisia)	2006-2012
Assistant	Department of physics	Faculty of Science Gafsa	University of Gafsa (Tunisia)	2004-2006



## Scientific Achievements

### Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
1	Hassen Dakhlaoui	The effects of doping layer location on the electronic and optical properties of GaN step quantum well	Superlattices and microstructures journal (Elsevier) 2016
2	Hassen Dakhlaoui Shaffa Almansour	Piezoelectric polarization and quantum size effects on the vertical transport in AlGa <sub>x</sub> N/GaN resonant tunneling diodes	Chinese physics B 2016
3	Hassen Dakhlaoui Shaffa Almansour Emane Algrafy	Effect of Si $\delta$ -Doping on the Linear and Nonlinear Optical Absorptions and Refractive Index Changes in InAlN/GaN Single Quantum Wells	Chinese physics Letters 2016
4	Hassen Dakhlaoui	Linear and nonlinear optical absorption coefficients and refractive index changes in GaN/Al <sub>x</sub> Ga <sub>(1-x)</sub> N double quantum wells operating at 1.55 $\mu$ m.	Journal of Applied physics 2015
5	Hassen Dakhlaoui Shaffa Almansour Emane Algrafy	Effect of Si $\delta$ -doped layer position on optical absorption in GaAs quantum well under hydrostatic pressure	Superlattices and microstructures journal (Elsevier) 2015
6	Hassen Dakhlaoui	Intersubband transitions in In <sub>x</sub> Al <sub>(1-x)</sub> N/In <sub>y</sub> Ga <sub>(1-y)</sub> N quantum well operating at 1.55 $\mu$ m	Chinese physics Letters 2014
7	Hassen Dakhlaoui	Quantum Size and Doping Concentration Effects on the Current-Voltage Characteristics in GaN Resonant Tunneling Diodes	Chinese physics Letters 2013
8	Hassen Dakhlaoui	Influence of doping layer concentration on the electronic transitions in symmetric Al <sub>x</sub> Ga <sub>(1-x)</sub> N/GaN double quantum wells	Optik-International Journal for Light and Electron Optics 2013



#	Name of Investigator(s)	Research Title	Publisher and Date of Publication
9	Hassen Dakhlaoui Sihem Jaziri	Effect of temperature on the electronic structure in n-modulation-doped $Al_xGa_{(1-x)}As/GaAs$ heterostructure	physica status solidi (c) 2006
10	Hassen Dakhlaoui Sihem Jaziri	Spin-dependent transmission of holes in III-V diluted magnetic semiconductor based heterostructure	Microelectronics journal 2006
11	Hassen Dakhlaoui Sihem Jaziri	Spin polarization in multilayer ferromagnetic semiconductor	Microelectronics journal 2006
12	Hassen Dakhlaoui Sihem Jaziri	Theoretical study of the magnetoresistance under electric field in III-V diluted magnetic semiconductor	Journal of magnetism and magnetic materials 2005
13	Hassen Dakhlaoui Sihem Jaziri	Magnetic properties in III-V diluted magnetic semiconductor quantum wells	Physica B 2005
14	Hassen Dakhlaoui Sihem Jaziri	Theoretical study of diluted magnetic semiconductor trilayers	physica status solidi (c) 2004

#### Completed Research Projects

#	Name of Investigator(s) (Supported by)	Research Title	Report Date
1	Hassen Dakhlaoui	Hydrostatic pressure and quantum size effects on optical susceptibility in $Al_xGa_{(1-x)}As/GaAs$ doped double quantum wells.	2014
2	Hassen Dakhlaoui	Piezoelectric effect on the current density in resonant tunneling diodes $GaN/Al_xGa_{(1-x)}N$	2014
3	Hassen Dakhlaoui	Theoretical study of temperature effect on the current density in cubic resonant tunneling diodes using a non-equilibrium Green's functions formalism	2015

#### Current Researches

#	Research Title	Name of Investigator(s)
1	Theoretical study of electronic properties of ZnO/MgZnO quantum well	Hassen Dakhlaoui



## Teaching Activities

Brief Description of Undergraduate Courses Taught: (Course Title – Code: Description)

1	General Physics I
2	General Physics II
3	Waves and oscillations
4	Quantum mechanics I
5	Quantum mechanics II
6	Electromagnetism I
7	Electromagnetism II

Brief Description of Postgraduate Courses Taught: (Course Title – Code: Description)

1	<b>Electrodynamics Advanced</b>
2	<b>Group Theory of physics</b>

Student Academic Supervision and Mentoring

#	Level	Number of Students	From	to
	Master	1	2016	2017

Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1	Master		College of science for girls University of Dammam	2016

## Last Update

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