Curriculum Vitae

Name : Ali Abdul-Karim Hussain Hamad (Professor of Physics)

Date of Birth : 1955

Nationality : Iraqi

Marital Status : Married

Degree Status : Ph.D.

E-mail:draliakh97@yahoo.com

Draliakh97@scbaghdad.edu.iq

Education History

Degree	University	Graduation Date	Country
B Sc.	Baghdad	1976	Iraq
M Sc..	Baghdad	1985	Iraq
PhD.	Baghdad	1997	Iraq

Career History

Item No.	Titles	Position	Period of Work		Contributions and Activities
			From	To	
1	College of Science-Univ. of Baghdad	Demonstrator	1978	1982	General Phys. Lab. 1st. year
2	Same	M. Sc. Student	1982	1985	Solar Energy Group
3	Same	Assist. Lecturer	1985	1987	Electronics Lab. 3rd. year
4	Iraqi Medicine College	Same	1987	1988	Tutorial &General Phys. Lab. 1st. year
5	College of Science-Univ. of Baghdad	Assist. Lecturer	1988	1989	Electronics Lab. 3rd. year & Molecular Spectroscopy Group
6	Same	Lecturer	1989	1993	General Physics 1st. year &Molecular Spectroscopy Group
7	Same	Assist. Prof.	1993	2003	Atomic Phys. 2nd. year , Molecular Spectroscopy M.Sc. students & Laser Phys. Ph.D. students
8	Same	Professor	2003	2007	Molecular Spectroscopy 4th year physics, Analytical Mechanics 3th year physics, Laser Phys. M.Sc. students & Ph.D
9	Same	professor	2007	2009	Mechanics 1st year physics,Atomic & molecular structure PhD. Student
10	same	professor	2009	till now.	Molecular physics 3rd year physics,Atomic & molecular structure Ph.D student
11	Same	Deputy Dean	2003	2005	

Books and Patents

* ”Physics : Electricity, Magnetism, Optics and Lasers” Univ. Book House, UAE , (2003), (in Arabic).
* Patent(No.1931,on 1987) “Liquid Solar Collector”.

Undergraduate Courses

Item No.	Course Title	Years	Level
1	General Physics Lab.	1978-1985	1st.Year Physics
2	Experimental Electronics	1985-1993	3rd.Year Physics
3	General Physics	1987-1988	1st. Year Medicine
4	General Physics	1988-1993	1st. Year Chemistry
5	Atomic Physics	1993-1999	2nd. Year Physics
6	Molecular Physics	1998-2000	4th. Year Physics
7	Modern Physics	1999-2003	2nd. Year Physics
8	Atomic Physics	1999-2003	2nd. Year Astronomy
9	Molecular Spectroscopy	2004-2006	4th year physics
10	Analytical Mechanics	2006- 2007	3th year physics
11	Mechanics	2007-2009	1st year physics
12	Molecular Physics	2009-2014	3rd physics
13	Mechanics	2014-2016	1st year physics
14	Tunable Lasers	2016-	4th year physics
15	Low Temperature Physics	2016-	4th year physics

Part (2) :Postgraduate Courses

Item No.	Course Title and Time	Level
1	Molecular Spectroscopy (1998-2002)	M Sc.
2	Laser Physics (2000- 2003)	Ph.D.
3	Laser Physics (2003-2005)	M. Sc.
4	Atomic and Molcular Spectroscopy	Ph.D.
5	Special Topics (Low Temperature Physics, Dye Lasers, Lifetime Measurements, Matrix Isolation Technique.) (2006-2007)	M Sc. & Ph.D. .
6	Atomic & Molecular structure (2007-)	Ph.D

Publications:

1-Patent (No.1931, on 1987) "Liquid Solar Collector".

2- "Use of Solutions in the Collection of Solar Energy". Solar & Wind Technology, Vol.6, 739-741, (1989).

3-" The Thermal Performance of a Group of Chemical Solutions". (the first Scientific Conference of the Foundation of the Technical Institutes, Sep.21-22, 1988).

4-"Enhancement of the Thermal Performance of the Liquid Solar Collector". Iraqi J.Sci.31, 484-498, (1990).

5-"Improving the Performance of a Liquid Solar Collector". Solar & Wind Technology 7, 601-605, (1990).

6-"The Effect of Annealing Temperature on the Structure and Optical Gap of Flash Evaporated Ga As Thin Films". Mathematics&Physics, Journal published by Iraqi Society of Physics &Math.12, 180-196, (1991).

7-" Some Diagnostic Parameters in the Photothermal of Chemical Solutions". J. Sci. Tikreet Univ. Vol. 5, no.2, (1999).

8-"A Semi-empirical Method for Calculating the all-day Efficiency of the Solar Collector." Proceeding of the International Conference of Energy Systems,2000,ICES,2K,Amman 25th -28th Sept. 2000,134-141.

9-" Utilization of Some Dyes as an Absorber Against Solar Radiation". Mathematics & Physics ,Journal published by Iraqi Society of Physics & Math. 15 ,11-22 , (2000) .

10-A Study of the Absorption and Lifetime Measurements of Matrix Toluene Molecule " J. J. Appl. Sci. 2 (3) ,13-22, (2000).

11--Matrix shift – Fluorescence Lifetime Correlation of C_6H_6, C_6D_6 and C_7H_8 Molecules " Iraqi J. Sci., 42C, 89-95, (2001).

12- " Elimination of the Instrumental Time Response Function in Short Lifetime Spectra Using the Method of Moments " J. Coll. Ed. 1 , 55-65, (2001).

13-"Ultraviolet Absorption Spectra and Fluoresence Lifetime of Mesitylene Molecule at Cryogenic Temperature ." Iraqi J. Sci. , 42C, 25-35, (2001) .

14- "Photo-physics of Coumarin 460 : Temperature Effect upon Fluorescence Lifetime and Non-radiative Rate Parameter ".Iraqi J. Phys. 1, 45-47, (2002)

15- " Some Photo-physical Parameters of Ethyl-benzene Molecule Trapped in Ar and CO Matrices) J. Saddam Univ. / Science 6, 59-65, (2002).

16- "Bromo-benzene Molecule : A low Temperature Spectroscopic View " J. Coll. Ed .for Women 13, 146-149 , (2002).

17 "Some Photophysical Properties of Coumarin-1 Dye in different Concentrations" Iraqi J. Sci. 43C, 98-105 , (2002).

18-"Oscillator Strength and Quantum Efficiency of Fluoranthene Molecule." Iraqi J. Phys.,No.2,Vol.2,20-24(2003)

19-" New Solar Thermal Materials " J. Um-Salama for Science 1 (1) , 154-157 , (2004).

20-"Fractal Image Classification Based on Adaptive Horizontal-Vertical Partitioning".Dirasat Journal,Jordan university,Vol.31, p197-201,(2004).

21- "Matrix Isolation Technique: A Good Diagnostic System in Molecular Physics " IEEE , the Third International Conference on systems, signals& Devices March21-24,2005, Sousse, Tunisia, Volume IV, Sensors , Circuits & Instruments systems.

22-"Absorption spectra and fluorescence lifetime of p-xylene molecule at cryogenic temperature" 6th international conference of the Balkan physical union 22-26 Aug.2006/Istanbul-Turkey.

23-"Spectral Analysis of Some Stars to Determine the Chemical Elements and Physical Properties ." *6th international conference of the Balkan physical union 22-26 Aug.2006/Istanbul-Turkey.*

24-"Spectroscopic and Structural Study of Copper Phthalocyanine (Cu Pc)." Iraqi J.Phys. Vol.5, 51-61,(2008).

25-"Measurement of Electron Temperature and Density in Atmospheric Pressure by DC-diode non-Magnetron Sputtering Technique" Iraqi J.Phys. Vol.5,110-114,(2008).

26- "SPECTRAL ANALYSIS AND PHYSICAL PROPERTIES OF MAIN-SEQUENCE STARS." Iraqi J. Sci. Vol.49,170-178,(2008)

27-"Simulation of Passively Q-Switched Rate Equation using Saturable Crystal Dy : CaF with Ruby Laser." Irqi J.Laser,Vol.8,(2009).

28- "Current-voltage and capacitance-voltage characteristics of Se/Si heterojunction prepared by DC planar magnetron sputtering technique" Iraqi J.Phys. Vol.8,97-100,(2010).

29- "The effect of anode temperature on the Optical characteristics of Se films prepared by direct current planar a magnetron sputtering" Iraqi J.Phys. Vol.8,28-32,(2011).

30- "Measurements of Te in a positive column by using double probe method" J.of Univ. of Thi-Qar Vol.8, 232-239 ,(2013).

31- "Double probe for measuring the plasma parameters" Iraqi J.Phys. Vol.10,11-16,(2012).

32-"Simulation of plasma properties in magnetron sputtering with Kr gas" International Journal of Application or Innovation in Engineering & Management, Volume 2, Issue 2, February 2013 ,p. 290-296.

33-*"Generate Radio-Frequency Capacitively Coupled Plasma 4MHz and Study of Breakdown Voltage Curved in Low-Pressure" International Journal of Application or Innovation in Engineering & Management,* ***Volume 3, Issue 1, January 2014 ,p.454-58.***

34-*"Effect of annealing temperature and laser pulse energy on the optical properties of CuO films prepared by pulsed laser deposition" Iraqi J.Phys. Vol.12,97-104,(2014).*

35-*" Investigation of Some Physical Parameters of Laser Induced Copper plasma" Asian Journal of Applied Sciences, Volume 02 – Issue 02,151-157, April 2014 .*

36- *" Diagnostics of low – pressure capacitively coupled RF discharge argon plasma " Iraqi J. Phys. ,Vol. 13, No.27,76-82,(2015).*

37- *"Effect of laser pulsed energy on the optical properties of Cu_2O films by pulsed laser deposition" Acta Physica Polonica A, Vol.128,419-22,(2015).*

38- *" Plasma characteristics of Ag:Al alloy produced bt fundamental and second harmonic frequency of Nd:YAG laser" Iraqi J. Phys. ,Vol. 14, No.31,205-15,(2016).*

39-*" Relative statistics of elements concentration in human teeth using x-ray fluorescence technique " Int. J. Current Eng. And Technology,Vol.6,No.6,2004-2009,(2016).*

40- *" Characterization of smoker and non-smoker human teeth using laser induced breakdown spectroscopy" Accepted to published in Iraqi J. Phys.*

M.Sc. Thesis

Use of chemical solutions in the conversion of solar energy.

Ph.D. Thesis

Fluorescence lifetime of matrix isolated: Toluene, p-Xylene and Mesitylene molecules.

Scientific Experience:

*****Plasma research group leader in department of physics.

*Examiner of 80 Ph.D. and MSc. Theses.

*Reviewer of 160 papers in several scientific journals.

*Chairman of scientific promotion committee in the College of Science/University of Baghdad (2010-2014).

*Editor-in –chief of the Iraqi Journal of Physics.

*Scientific promotion committee member in Dijla university college (2010-2013).

* Scientific promotion committee member in Institute of laser for post graduate studies (2004-2009).

***** Chairman of scientific promotion committee of the university of Baghdad (2014 - 2016) .

Supervisor of the following graduate students:

1-A.M. Hamza(M.Sc.2000)

2- F.A-H. Mutlak(M.Sc.2001)

3- M.M. Abd (M.Sc.2003)

4-A.A. Habeeb (M.Sc.2003)

5- Q.R. Ali (M.Sc.2003)

6- Q.H. Abd (M.Sc.2006)

7- A.A. Salman (M.Sc.2007)

8-A.A. Mashkoor (Ph.D.2008)

9-K.A.Adem (Ph.D. 2010)

10-E.A.Salman(Ph.D. 2012)

11-M.K.Hummadi (Ph.D. 2012)

12-M.R.Abdul-Amer(Ph.D.2014)

13-W.I.Yaseen(Ph.D.2015)

14-H.M.Salman(MSc. 2015)

15- A.Abdul-Razzaq (PhD. Student)

16- A.Naji(PhD. Student)

17- F. Joomaa (Msc. Student)

UNIVERSITA' DEGLI STUDI DI MILANO BICOCCA

Prof. Dimitri Batani
Dipartimento di Fisica "G.Occhialini"
Università degli Studi di Milano- Bicocca
Piazza della Scienza 3, 20126 Milano, ITALY
tel 39 02 6448 2313
fax 39 02 6448 2585
email batani@mib.infn.it

Milano, 25 May 2007

To whom it may concern

I herewith declare that Prof. Ali Abdul-Karim Hussain from the University of Baghdad, Iraq, has spent a period of 3 months (March - May 2007) at the Physics Department "G.Occhiallini" of the University of Milano Bicocca, where he has worked in the laser-plasma group, which I personally coordinate.

The stay of Prof. Ali Hussain has been funded through a grant of MIUR, the Italian Ministry of University, in the framework of the "Programme for the requalification of the Iraqi scientific system" (Programma di borse di studio per la riabilitazione del sistema scientifico iracheno) coordinated by the "Centro Volta" in Como.

During his stay, he has collaborated with our research activities and he has also made a part of the lessons of the course in "Modern Optics" addressed to the students in physics of the 3rd year.
In particular, in the course he has been teaching the students about the "Molecular spectroscopy" including more advanced topics like Raman Scattering. Lessons were given in English.
He has also actively collaborated with me in reviewing some papers submitted for publication and a Ph.D. thesis.
Finally he has given a seminar on the scientific research he performed at the University of Baghdad.

I can certainly say that it has been a pleasure to work with Prof. Ali Hussain during this period. Also, I have deeply appreciated both his human and scientific qualities. I think he his a good scientist and he is also a good teacher, who has been able to address our students despite the difficulties of the different languages.

Dimitri Batani

Dimitri Batani

UNIVERSITA' DEGLI STUDI DI MILANO
DIPARTIMENTO DI FISICA "G. OCCHIALINI"
BICOCCA

UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

STATEMENT BY THE HOST UNIVERSITY

This is to certify that

Dr. Ali Abdul-Karim Hussain, coming from University of Baghdad did research work, as Visiting Researcher, at the "G. Occhialini" Department of Physics, Faculty of Mathematics, Physics and Natural Sciences, Università degli Studi di Milano-Bicocca, from 27th February 2007 to 25th May 2007.

Milano, 19th July 2007

THE HEAD OF INTERNATIONAL OFFICE

Dr.ssa Agnese Cofler

UNIVERSITA' DEGLI STUDI DI MILANO BICOCCA – INTERNATIONAL OFFICE – Socrates Point
Via Libero Temolo 4, I-20126 MILANO, voice:+39 02 6448 6154/6149 fax:+39 02 6448 6012
e-mail: international.office@unimib.it

UNM

Department of Physics & Astronomy

September 30, 2013

To whom it may concern:

During the period from Sept. 1, 2013 until Sept. 30, 2013, Prof. Ali A.-K. Hussain Hamad has been in residence as a visiting faculty here in the department of Physics and Astronomy at the University of New Mexico. During this time he has toured six of our research labs and attended many seminars and colloquia presented by researchers from UNM and other US universities. In addition he gave a presentation covering the University of Baghdad and his own work on cryogenic spectroscopy of organic compounds to my research group.

Best regards,

Prof. Wolfgang Rudolph
Department of Physics and Astronomy
University of New Mexico

The University of New Mexico • MSC07 4220 • 1 University of New Mexico • Albuquerque, NM 87131-0001 • Phone 505.277.2616 • Fax 505.277.1520 • www.unm.edu
1919 Lomas Blvd NE • http://panda.unm.edu