Associate. Prof. Dr.Eng. Magdy Hussein Mourad Mohammad

Date of Birth: June the First, 1968.
Nationality: Egyptian
E-Mail: magdyhmourad@gmail.com dr.magdymourad@niles.edu.eg
Mobile: 00201030036306

Language skills

English & French languages (V.GOOD).
Japanese Language (1st level Grammar & Kanji)
Arabic language (Mother tongue).

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August 2020- Till now :: Associate Professor at the National Institute of laser Enhanced Sciences,Department of Laser Engineering applications , Cairo University .

June 2012-July 2020 ::Senior Lecturer (Equivalent to Assistant Professor), National Inst of Laser Sciences, Department of Laser Engineering,Cairo Univ.

January 2006-May 2011 :Post Doctoral fellow on
RF-Molecular beam Epitaxy for III-V (Gan and its ternaries) & Lecturer at the school of Physics (USM) at Univ of Science Malaysia (NOR) Nano Optoelectronic Lab .

April 2005-December 2006) (Goldi-Bahgat R&D engineering group)
Engineering consultant for flat panel display manufacture
at Goldi R&D Electronics Company Egypt

Research :Center of Excellence Fellow & Post Doctoral fellowships

Centre of Excellence (COE) Fellow
(April 2004- January 2005) (Japan,Sendai)
Post doctoral Researcher at Tohoku University Clean room of the Venture Business Laboratory central University lab ***Research Topics*** *:*
The fabrication of micro-electron emitter device for flat panel display in the VBL (Venture Business Laboratory) clean Room
Gallium Nitride Growth on silicon wafer for Light Emitting Devices and Lasers using Molecular Beam Epitaxy chamber (Riber).

Post Doctoral fellowships (Japan):
(October 2001-March2004) (Japan,Sendai)

Post Doctoral Researcher at the Venture Business Laboratory of Tohoku University ***Research Topics:*** *Device fabrication of a micro-electron field emitter display device : design, fabrication & characterization and semiconductor laser simulation .*

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(23rd October 2000- September 2001) (Usa. Illinois)

Post Doctoral Researcher at the Center for Quantum Devices (Northwestern University Evanston Illinois USA).

Research Topics: *:The Fabrication, processing, and Characterization of DFB Semiconductor Quantum Cascade Laser using III-V materials (Arsenide Based InAs-AlAs-GaAs) in the clean room of the center using MBE***.**

Fabrication of a Mask Aligner used in UV photolithography & Teaching a 1 week workshop in Int.Conf of Laser Applications, Cairo University Nov.2019 , using the same :

https://scholar.cu.edu.eg/?q=magdy_mourad/files/mask_aligner_awards_conf_icla10_magdy_hussein_1-merged_1.pdf

Published Journal Papers

1. **Absorptivity enhancement of black silicon using electroless Cu plating Ahmed Khaled, Magdy Hussein Mourad, Ahmed Amr Elsayed, Frédéric Marty,Elyes Nefzaoui, Tarik Bourouina,Yasser M. Sabry, Diaa A. M. Khalil. (Refereed paper) SPIE Photonics West 2020, 1-6 February 2020 San Francisco, California,US. Paper 11285-63 https://spie.org/PWO/conferencedetails/silicon-photonics?SSO=1**

2. **Deposition, characterization, performance of cadmium sulfide quantum dots thin films using SILAR technique for quantum dot sensitized solar cell applications. Z. Abdel Hamid, H.B. Hassan, Manal A. Hassan, M. Hussein Mourad, S. Anwar. Special Issue, Recent Advances in Materials Science and Engineering II, Key Engineering Materials, Vol 835, March 2020, pp.374-383 .**

3. **Effect of cadmium sulfide quantum dots prepared by chemical bath deposition technique on the performance of solar cell**
   Z. Abdel Hamid, H. B. Hassan, Manal A. Hassan, M. Hussein Mourad, S. Anwar
   ***The Egyptian Journal of Chemistry*, Volume 62, Issue 9, *September* 2019, Page 2-6**
   https://ejchem.journals.ekb.eg/article_28881.html

4. **Structural and electrical performance of epitaxial InP based heterojunctions prepared by liquid phase epitaxy**
   FARAG, A. A. M., A. ASHERY, A. H. Zaki, and H. M. Mourad,
   ***Chinese Journal of Physics*, vol. 59 , issue June 2019, pp. 83-91, 2019.**
   https://www.sciencedirect.com/science/article/abs/pii/S0577907318312139

5. **Monocrystalline solar cells performance coated by silver nanoparticles: Effect of NPs sizes from point of view Mie theory**
   RashaM.Elnoby**M. HusseinMourad**Salah L. HassabElnabyMaramT.H.Abou Kana;
   Optics & Laser Technology,Volume 101, May 2018, Pages 208-215

https://www.sciencedirect.com/science/article/pii/S0030399217303936
https://doi.org/10.1016/j.optlastec.2017.11.019

6. **Structural and frequency dependencies of a.c. and dielectric characterizations of epitaxial InSb-based heterojunctions**

   A. Ashery, A. H. Zaki, **M.Hussein MOURAD,** A. M. Azab, and A. A. M. FARAG,, Bulletin of Material Science , vol. Vol. 39, , issue No. 4 , pp. 1057-1063, 2016
   http://www.ias.ac.in/describe/article/boms/039/04/1057-1063

7. **Effect of Laser on Carbon nano-tubes /Poly vinylalcoholCompositeused in Microwave Shielding**

Gamal M. Nasr, Ashraf S. AbdelHaleem, AnkeKlingner, Adel M. Alnozahy, **M.HusseinMourad**
Life Science Journal ,Volume 12 - Number 3, March 25, 2015. life1203
http://www.lifesciencesite.com/lsj/life120315/015_28166life120315_110_117.pdf

8. **The DC Electrical Properties of Polyvinyl Alcohol/ Multi-Walled Carbon Nanotube Composites**

   Gamal M. Nasr, Ashraf S. Abd El -Haleem, Anke Klingner, Adel M.Alnozahy, **M.HusseinMourad*;***
   Journal of Multidisciplinary Engineering Science and Technology (JMEST) ISSN: 3159-0040 Vol. 2 Issue 5, May - 2015 http://www.jmest.org/vol-2-issue-5-may-2015/ http://www.jmest.org/wp-content/uploads/JMESTN42350633.pdf

9. **"Strong Room Temperature 505 nm Emission from Hexagonal Crack Free InGaN Thin Film on Si(111) Grown by MBE"**

Chuah, L. S., Z. Hassan, C. W. Chin, **M.H. Mourad**, F. K. Yam, and S. S. Ng,, *Composite Interfaces*, vol. 18, pp. 37–47, 2011
http://www.tandfonline.com/doi/abs/10.1163/092764410X539262

10. **"p-GaN/n-Si HETEROJUNCTION PHOTODIODES"**

Chuah, L. S., Z. Hassan, A. B. U. H. HASSAN, and **H. M. Mourad**,, Surface Review and Letters,, vol. Vol. 15, issue No. 5, pp. 699–703, 2008.
http://www.worldscientific.com/doi/pdfplus/10.1142/S0218625X08011871

11. **"Electron Emission from Indium Tin Oxide/Silicon Monoxide/Gold Structure" Mourad, M. H**., K. Totsu, S. Kumagai, S. Samukawa, and M. Esashi,

Japanese Journal Of Applied Physics, vol. 44, issue 3, pp. 1414-1418, 2005.
http://iopscience.iop.org/article/10.1143/JJAP.44.1414

12. **Design and simulation of a two-sectional Fabry-Perot sampled grating distributed Bragg reflector laser for dense wavelength division multiplexing applications**

Magdy Hussein Mourad; **Jean**-Pierre Vilcot; **Didier** J. Decoster; Dominique D. Marcenac
Optical Engineering Journal , Vol.41 (2): 479-483 FEB 2002
https://spie.org/publications/journal/10.1117/1.1428296

13. **Design and simulation of a dual mode semiconductor laser using sampled grating DFB Structure**

M.Hussein Mourad, Vilcot JP, Decoster D, Marcenac **IEE-Optoelectronics. Vol.147 (01) : 2000, pp.37-42**.
https://digital-library.theiet.org/content/journals/10.1049/ip-opt_20000297

The journal paper number 13 above was Cited in:

1)US Patent 7194014 –
Furukawa electric Tokyo-Japan
"Semiconductor laser device, semiconductor laser module, and optical fiber amplifier using the semiconductor laser module"

2)US Patent 6947463 –
Furukawa electric Tokyo-Japan
"Semiconductor laser device for use in a laser module."

Conference Papers

1) **M.Hussein Mourad .**
"The influence of internal quantum loss on the dual modality of III-V Sampled Grating Distributed feedback Laser. "
National Institute of Laser Enhanced Sciences (N.I.L.E.S), Engineering Department, Cairo University, Guiza, Egypt,
The 9th International Conference on Laser Applications,Cairo, Egypt - ICLA 9 13-15 November 2016

2) **M.Hussein Mourad .**
"*The stability of Bandwidth Between Nulls (BWBN)beyond a threshold cavity length for Sampled grating distributed Brag Reflector Laser SG-DBR laser*" , 1st international Joint symposium on
Product Development and Innovation and Industrial System and Operational Management Pdi-Isom , Ain Shams University School of Engineering 3-5 May 2016.

3) **"*Gateless-FET Undoped AlGaN/GaN HEMT Structure for Liquid-Phase Sensor*"**
Abidin, M. S. Z., A. M. Hashim, A. A. Aziz, M. R. Hashim, and M. H. M. Mohamed, , *IEEE, ICSE2010 Proc. 2010, Melaka, Malaysia*, vol. ICSE2010, pp. 309-312, 2010.

4) **Plasma Interactions In a Capacitively Coupled n-AlGaAs/GaAsInterdigital-Gated HEMT Device", ZonFazlilaMohdAhir, Abdul ManafHashim and Magdy Hussein Mourad Mohammad,**

International Advanced Technology Congress 2009, 3-5 November 2009, Kuala Lumpur, MALAYSIA
http://mjiit.utm.my/research-adme/2009-3/

Plasma Interactions in a Capacitively Coupled N AlGaAs/GaAs Interdigital-Gated HEMT Device

ZonfazlilaMohdAhir, Abdul Manaf Hashim, M.H. Mourad

CAMAN 2009 (Conference on advanced Materials and Nanotechnology)
3-5 November 2009, Kuala Lumpur, MALAYSIA

5) **FTIR Spectroscopy And high Resolution X-Ray Diffraction Investigation Of Thin Films Of AlN On Si Substrates By MBE.**

S.C.TEOW, C.W.Shin, Z.Hassan, S.S.Ng, L.S.Shuah, *M.HusseinMourad*, F.K.Yam, K.Ibrahim
ICFMD conference 2008 International Conference on Functional Materials and Devices 2008 (ICFMD-2008)

6) **Series Resistance in Thin Film n-GaN/AlN/n-Si(111) Heterostructure**

L.S. Chuah*, Z. Hassan, H. Abu Hassan, *M. Hussein Mourad*, K. Ibrahim.
ISESCO International workshop and conference on NanoTechnology (IWCN 2007) ,12-15 June 2007 Kuala Lumpur IEEE.

7) **The growth of III-V nitrides heterostructures on silicon substrate by plasma assistedMolecular Beam epitaxy (MBE).**

F.K.Yam, Z.Hassan, L.S.Chuah, N.Zainal, C.W.chin, S.M.Tahab,***M.HusseinMourad***

ICSE(International conference on Semiconductor Electronics
IEEE .(29nov-1Dec)2006

8)**„New Step Tunable Dual Mode Laser",.**

M.Hussein MOURAD, S.SAMUKAWA
THZ ELECTRONICS 2003 (Sep 24-26), Sendai, JAPAN

9) **More than 400 times electron emission enhancement at low vacuum and very low accelerating voltage by selecting suitable cathode material .**

M.Hussein MOURAD, S.KUMAGAI, S.SAMUKAWA
IVMC (International vacuum Microelectronics Conference) 2003 (July 7-11) Sendai, JAPAN

10)**Electron emission enhancement by grating the upper metallic gold layer of Al/SiO/Au device.**

M.Hussein MOURAD, **S.KUMAGAI, S.SAMUKAWA**Japanese Society of Applied Physics conferences (JSAP):

64th conference of JSAP : Spring 2003

11) Electron emission from AL-Si-SiO-Au devices
(26a-Q-4), p.667.
M.Hussein MOURAD, **S.KUMAGAI, S.SAMUKAWA**
63rd conference of JSAP (Japanese society of Applied Physics): Fall 2002

12) Best Poster Award
New 2 sections FP-SGDBR semiconductor laser for DWDM applications M.Hussein MOURAD, J.P.VILCOT, D.DECOSTER , &D.MARCENAC.
10th international conference on laser Optics (Saint Petersburg) Russia, June 2000.

13) „Anomalous Behavior of coupling coefficient effect and spatial carrier density variation inside sampled grating DFB lasers"
M.Hussein MOURAD, J.P.VILCOT, D.DECOSTER , &D.MARCENAC.
PHOTONICS WEST 2000(22-28 January 2000)

14) Best Poster Award
„An Optimal dual mode design having its mode spacing independent on the cavity length variation or cleaving tolerances"
M. Hussein. Mourad, J-P. Vilcot, D. Decoster, Institut d'Electronique et de Micro Electronique du Nord/UMR/CNRS (France); D. Marcenac, British Telecom Labs. (UK). EDMO '99: High Performance Electron Devices for Microwaves and Optoelectronic Applications Nov. 24-25, 1999 (King's College London).

15) A new application of sampled grating semiconductor laser for dual mode generation. Semiconductor Laser Workshop Dynamics, at WIAS ,Weierstass Institute for Applied analysis and Stochastics (BERLIN), 9-11 September 1999.
M.Hussein MOURAD, J.P.VILCOT, D.DECOSTER , &D.MARCENAC.

16) Dual mode semiconductor Laser design and Optimisation for microwave signal generation (60 GHz). 1999 European Semiconductor Laser Workshop 23-24 September at theEcole Nationale Supérieure de télécommunications TELECOM PARIS.

17) A new dual mode semiconductor laser design for Radio over Fibre applications. th -7th April 1999SIOEconference,SemiconductorIntegratedOptoElectronics4

at Cardiff University ,United Kingdom(the Wales) .
M.Hussein MOURAD,D.MARCENAC J.P.VILCOT, D.DECOSTER ,.**

Ph.D Thesis formal Examiner to the following thesis :

Defence date : **July 2009**
Thesis Title :

"Optical Bistability In Nonlinear Kerr Dielectric And Ferroelectric Materials "
Ph.D Thesis owner : Abdel-BASET Mohammad El Nabawi Abdel-Hamid Ibrahim
A Thesis submitted to UniversitiSains Malaysia (USM) in fulfillment of the requirements for the degree of **Doctor of Philosophy (Ph.D) in Physics**

http://eprints.usm.my/15593/1/OPTICAL_BISTABILITY_IN_NONLINEAR.pdf

The Total Number Of Courses I Taught After my PhD (2001-2018)

. 17 courses

From June 2012-Until now January 2020 (at National Institute of laser Eng.Department, Cairo university)

1. ***Laser Physics I (Eal 501), Eal means -→ Engineering Applications of Lasers***
2. ***Advanced Laser Physics (Eal 601),***
3. ***Laser Spectroscopy (Eal 505) ,***
4. ***Laser Applications in Electrical and Electronic Engineering (Eal 513),***
5. ***Optoelectronics (Eal 503).***
6. ***Laser Laboratory (Eal 604).***
7. ***Applied Project (Eal 508).***

The Courses taught at the School of Electronics and Communications Engineering at Cairo University , Fayoum Branch as a visiting senior lecturer.

(6 courses).

8. ***Semiconductor Devices (2nd year Elec&Comm Eng.Dept)***
9. ***Wave Propagation & Antenna theory (4th year Elec&Comm Eng.Dept)***
10. ***Electronic circuits (4th year Elec&Comm Eng.Dept)***
11. ***Active & Passive Filters circuits (3rd year Elec&Comm Eng.Dept)***
12. ***Electronic circuits (4th year Elec&Comm Eng.Dept)***
13. ***Microwave Theory (Post Graduate, M.Sc course Elec&Comm Eng.Dept)***

The total number of Under Graduated courses I taught While being a Senior Lecturer At USM (University of Science Malaysia) (June 2006-May 2011)

(4 Courses)

14. ***Technology of Display and data Storage (3rd year Engineering Physics) – 4 semesters ZKE 342***
15. ***Applied Laser Spectroscopy (3rd year Engineering Physics) 4 semesters***
16. ***Thermodynamics (3rd year Engineering Physics)- 1 semester ZCT 212***
17. ***Laboratory 3rd year Engineering Physics. 3 semesters LKM 100 (2 Semesters)***

Education & Academic History

Oct 1996- October 2000 : Ph. D thesis at the Institute of Electronics &Microelectronics of the North of France (IEMN) ,The Optoelectronics Dept, University of Sciences and Technology of Lille.

Ph. D thesis Title:

Design & simulation of a new semiconductor laser for dual mode signal generation for millimeter-wave generation, radio over fiber applications and **D**ense **W**ave **D**ivision **M**ultiplexing (**DWDM**).

Feb 1996-Sep 1996 :A research Engineer at the **N**ational **I**nstitute of **L**aser **E**nhanced **S**ciences (Engineering department) at Cairo University Egypt.

1994-1995 :M.Sc in France at the Institut National Polytechnique de Grenoble (**I.N.P.G**) , Ecole Nationale Supérieure d'Electronique et de Radio électricité de Grenoble, in Optics, Optoelectronics & Microwaves , (**E.N.S.E.R.G**) Universite Joseph Fourier (Grenoble).

Master Thesis Title :

Fabrication and characterization of an optical coupler on glass thermoelectricallycontrolled (I Fabricated it in the clean room of the L.E.M.O-E.N.S.E.R.G) .

1993-1994 : M.Sc (course-work) in microwaves and Optoelectronics at Cairo University (Faculty of Engineering),microwaves & Optoelectronics departement (grade A-).

1987-1992 :B.Sc in Electronics & Communications Engineering , at Cairo University, Faculty of Electronics and Communications Engineering Grade Good.

1986-1987 : General Certificate of Education Examionation (**London Univ**.Board) **G.C.E Grade A** .

1973-1985 : KG-Primary-Preparatory-Secondary Student at the 'Collège des Frères (De La Salle College) a French educating school .

Technological experience

Total number of years of clean room experience =12 years

6 Malaysia(Usm)+4 Japan(Tohoku Univ)+1Usa(Northwestern Univ)+ 1France(Inpg-Univ.joseph Fourier)

Growth and Processing Experience :

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1)Radio Frequency Molecular Beam Epitaxy: Veeco mod Gen II for GaN and its ternaries(AlGaN and InGaN) Veeco RF- Model Gen II
2) Ion implantation on Silicon wafer (Phosphorous,Boron and Arsenic,),
3) Liquid Phase Epitaxy for III-V GaAs growth and its ternaries .
4) hot filament CVD (Chemical vapor deposition) for DLC diamond like Carbon.
5) Electron Beam Lithography (Raith Quantum integrated with Jeol Sem)
6) Mask aligner Karl Suss MJb3 UV lithography,
7)Emulsion and Chromium Mask design and fabrication,
8)wet & dry etching for GaN, GaAs, Silicon
9) Silicon wafer cleaning using Rca cleaning
10)metal deposition by RF sputtering, e-beam and thermal deposition,

6 sputtering machines (each machine for group of metals to avoid cross contamination), {DC sputtering, RF sputtering (Eiko , Anelva, Jeol, Edwards)}. ion implanter, line Stepper, mask Aligner, LPCVD for Polysilicon, 3 stack furnace, oxidation furnace, Si3N4 CVD, APCVD, PECVD, Etching machine by RIE and ICP-RIE, Diffusion Furnaces, 2 Electron Beam Lithography machines (Leica and

Elionix), Mask Pattern Generator, mask aligner, Profilemeter, ellipsometer, SEM, AFM, FTIR Raman, XRD, XPS (incorporated inside the MBE machine in the Riber buffer chamber), SIMS, AFM, Surface Profilemeter)

5 <u>years experience on the RF-MBE growth such as:</u> ,

Sample transfer from load lock to buffer to growth chamber
Deciding the growth temperature(wafer temperature) the cell temperature for each layer, RHEED monitoring, Nitrogen RF plasma ignition, Impedance matching,
Ex-situ analysis such as SEM, Hall measurement,XRD, Photoluminescence, Raman) for device fabrication such as MESFET and HEMT and LED .
During my stay I attended a whole 1 month demonstration, installation and growth (20 Growth) for this machine by VEECO USA with 2 international experts in the growth for nitride based materials coming from US for a period of full 1 month training in the MBE lab in Malaysia.

Following Growth I process the grown layer by **Electron Beam Lithography** for device optoelectronic device fabrication

<u>Examples of some monocrystalline layers that I grew using MBE: Veeco RF- Mod Gen II:</u>

1. **Al0.3Ga0.7N layer grown over GaN over AlN over HT AlN over flushed Al layer grown on Silicon.**
2. **In.43Ga0.57N layer grown over GaN over AlN over HT AlN over flushed Al layer grown on Silicon.**
3. **N-type Al.4GaN.6 layer over AlGaN undoped over GaN over AlN .**
4. **LED with Quantum well layers of InGaN/GaN sandwitched between upper AlGaN electro blocking layer and AlGaN (upper p and lower n) cladding layer with an (p and n)upper and lower gan layer for ohmic contact deposition grown on Silicon.**
5. **<u>N.B</u> During the GaN well growth indium was incorporated by opening indium shutter with a partial pressure of (7*10^-8) to improve the quality of GaN grown layer .**
6. **MOS capacitor made of Al flushed metal layer over silicon, AlN high Al flux thin layer over the Al, AlN stoichiometric layer, GaN stoichiometric layer grown over AlN, thin AlGaN layer (High Al mole fraction x=0.7) grown over the GaN layer , AlN grown over the AlGaN .**
7. **Study of the In flux increase during the GaN growth for the improvement of stoichiometry of the GaN layer and the reduction of the FWHM of the photoluminescence of the GaN layer with increase of its peak.**
8. **Thin film Slightly doped GaN layer over AlN buffer stoichiometric layer over AlN ht layer over Al flushed over Silicon wafer**
9. **On Sapphire , Growth of slightly doped GaN over very thin AlN after sapphire low temperature surface nitridation.**

<u>Invitations and awards</u>

1) **<u>invitation by NT Canada Ottawa (full board invitation including Aeroplane Ticket and my stay in Hotel and internal Transportation), for a period of one week in Ottawa to give them 3 lectures on my work of laser. (Full board invitation)</u>**

2) **Caswell Technologies-Optoelectronic devices United Kingdom(Full board invitation)**

3) **Ferdinand Braun Institute for High Frequency Techniques (FBH- Berlin), Germany, (full board invitation including Aeroplane Ticket and my stay in Hotel and internal Transportation) for a period of 3 days for one lecture and meeting of the heads of the FBH (Full board invitation)**

4) Heinrick Hertz Institute HHI Berlin , Germany . (Full board invitation)

Engineering Consultancy

1) Engineering Consultant for the Egyptian Chinese Clean room Project held in Sohag for the manufacture of Solar cells https://enterprise.press/stories/2019/09/10/egyptian-chinese-solar-research-facility-opens-in-sohag/

2) Engineering Consultant for the Microelectronic Center of the National Center of Scientific Research Cairo Egypt .

Awards and Scholarships (1999-2000)

***A F-MADE SPIE** scholarship from the SPIE (August) 2000 .
**Winner of the best young paper award in the SPIE laser conference in Saint Petersburg Russia 2000

* A **SPIE** scholarship for the 1999 year.

** Winner of the best Paper award in an IEEE conference held at King 's College in London University , School of Electronics engineering (Electron Devices for Microwaves & Optoelectronic Applications-EDMO-99) on finding an Optimal dual mode design having its mode spacing independent on the cavity length variation or cleaving tolerances
**** A SPIE official invitation to attend the PHOTONICS WEST conference for a Paper and a Poster presentation.
******Invitation from The FBH (Ferdinand-Braun Institute for High frequency applications)-Institute at Berlin to give a 1-hour seminar on my research results.

Master and Ph.D thesis co-supervision :

Fabrication and characterization of a silicon MOSFET transistor (P channel enhancement type) with a gate length of 8 micrometer using Electron Beam lithography

Master and Ph.D thesis supervision and Co-Supervision

Feb 2017 M.Sc in Cairo University National Institute of Laser:""
Solar Cell Enhancement Efficiency By Deposition Of Nanosilver Layers.
Rasha M.El Nobi

(Jan 2007-April 2011)

1) NMR circuit for detecting hydrogen molecules (2students).
M.Sc student name: Mohammad Hafiz and Mohammad Faiz.

2) *n-galium nitride Mesfet fabrication and characterization using electron beam lithograophy .*

3) X ray generation and 30 KV generation using Electron emitted devices : M.Sc student name: Khaled AlDroobi

4 Photodetector fabrication and characterization using e beam lithography for the first time in NOR lab.
M.Sc student name: Mohammad Bukhari.
Supervising (Main supervisor)
6 final year project students 2007-2008 .
Also for the first time to fabricate a transistor MESFET with photolithography on GaN and on GaAs.

7) "Fabrication & Measurement of optical planar waveguide based on glass substrate using ion exchange method for biomedical sensor application". M.Sc student name: Mr. Moayiad Youssof

8) "Fabrication & Measurement of a MEMS pressure sensor based on silicon technology ". (January 2006- January 2007) Co-Supervising with (Faculty of Mechanical engineering) final year B.Sc project
Student Name Arwin

Directing Research for M.Sc Students by Course Work at School of Physics (Mr.anwar and Mr.Nazir) at Usm Nor Laboratory for the fabrication and Measurements of workfunction measuring tool using ::
-1)Photoelectric effect .
-2)Kelvin Probe method. (From February 2006 to July 2006).
Directing research for 2 final year project students by coursework
School of Physics for the Synthesis and Production of Phosphorus spin on dopant for silicon semiconductor devices manufacture.

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Computer (PC) language skills
Visual C++ O.O.P, Matlab (Ph. D thesis main programming tools) .
Computer (PC) software packages
MS word, excel, power-point, HG, Corel Draw.
Sports:: Swimming, Squash,Basket Ball.
Hobbies: Picnic, sight seeing, .