Curriculum Vitae السيرة الذاتية

PERSONAL DATA معلومات شخصية

Name:	**Raed** First	**Mohammed** Middle	**Hassan** Last
الأسم رائد مُحَمَّد حسن البربوري			
Date of Birth: **7/5/1966**			تاريخ الميلاد: **1966/5/7**
Place of Birth: **IRAQ/Basra**			البلد والمحافظة: العراق/ البصرة
Nationality: **IRAQI**			الجنسية: عراقية

Academic Affiliation	**Professor** أستاذ	الدرجة العلمية
Current University	**Basra University** جامعة البصرة	الجامعة الحالية
Current Faculty	**College of Education** كلية التربية **for Pure Sceince** للعلوم الصرفة	الكلية الحالية
Current Department	**Physics Department** قسم الفيزياء	القسم الحالي
General Specialization	**Physics Science** علوم فيزياء	الإختصاص العام
Fine Specialization	**Laser Physics** فيزياء الليزر	الإختصاص الدقيق

Corresponding Address عنوان المراسلة

Dr Raed M Hassan د. رائد مُحَمَّد حسن

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Basra – Iraq البصرة العراق

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E-Mail: raed_m_hassan@yahoo.com **البريد الالكتروني:**

Work Address عنوان العمل

Dr Raed M Hassan د. رائد محمد حسن

Department of Physics; قسم الفيزياء

Faculty of Education كلية التربية

Basra – Iraq البصرة – العراق

Marital Status: **Married**	الحالة الزوجية: متزوج
Nationality of Spouse: **Iraqi**	جنسية الزوجة: عراقية
Number of Children**: 6**	عدد الأطفال: **6**

ACADEMIC QUALIFICATIONS المؤهلات الأكاديمية

First University Degree الشهادة الجامعية الأولية

Name of Degree: ***B.Sc.*** **ألشهادة: بكالوريوس**

Date awarded: **1987** **تاريخ منح الشهادة: 1987**

College (or Faculty): **Education** **الكلية: التربية**

University: **University of Basrah** **الجامعة: جامعة البصرة**

Specialization: **Physics Science** **التخصص:علوم فيزياء**

Second University Degree الشهادة الجامعية الثانية

(Master Of Science) ***(ماجستير علوم)***

Name of Degree: *M.Sc.* **الشهادة: ماجستير**

Date awarded: 1979 **تاريخ منح الشهادة: 1997**

College (or Faculty): **Education** **الكلية: التربية**

University: **University of Basrah/ Iraq** **الجامعة: جامعة البصرة/العراق**

Specialization: **Laser Physics** **التخصص: فيزياء الليزر**

Thesis title: Theoretical Study of Mode – Splitting in CW Far – Infrared Lasers

عنوان رسالة الماجستير: دراسة نظرية لأنشطار النمط في ليزرات تحت الحمراء البعيدة ذو الموجة المستمرة

Third University Degree الشهادة الجامعية الثالثة

(Doctorate) ***(دكتوراه)***

Name of Degree*: Ph. D.* **الشهادة: دكتوراه**

Date awarded: 2010 **تاريخ منح الشهادة: 2010**

College (or Faculty): Education **الكلية والقسم: كلية التربية / قسم الفيزياء**

University: **University of Basrah/ Iraq** **الجامعة: جامعة البصرة/العراق**

Specialization: Theoretical Laser Physics ***التخصص: فيزياء الليزر النظرية***

Thesis title Theoretical Study of Turn-on Dynamics and Lasing Operation Characteristics of Semiconductor Quantum Dot Lasers.

عنوان الإطروحة: دراسة نظرية لحركيات بدأ التشغيل و خصائص عملية الليزر في ليزرات النقطة الكمية لشبه الموصل

COMPUTER USE خبرة في إستخدام الحاسوب

Windows + Microsoft Word + Microsoft Excel + Developer Studio + Math. Lab. + Graf4win + Surfer + Many other software, algorithms for symbolic computation, quantum computation, Mathematica and MathLab

Courses tough at undergraduate level المقررات التي تم تدريسها في الدراسات الأولية

Institution	Course Title	Language of Instruction
Basrah Univ.	Electricity	Arabic
Basrah Univ.	General Physics	Arabic
Basrah Univ.	Classical Mechanics	Arabic
Basrah Univ.	Sound and waves motion	Arabic
Basrah Univ.	Electronics Physics	English
Basrah Univ.	Computer	English
Basrah Univ.	Laser Physics	Arabic
Basrah Univ.	Electromagnetic theory	Arabic
Basrah Univ.	Quantum Mechanics	English

Courses tough at graduate level/ PhD المقررات التي تم تدريسها في الدراسات العليا / الدكتوراة

Institution	Course Title	Language of Instruction
Basrah Univ.	Computational Physics	English
Basrah Univ.	Semiconductors Physics	English

B. Supervision of theses and dissertations الإشراف على طلبة الدراسات العليا

Title of thesis or dissertation	Degree granted	University	Date
1- Theoretical study of quantum dot lasers with feedback by multi-population rate equation	M.Sc	Basrah	2014
2- Characteristic temperature and lowest excitation energy of emiconductor QD laser	M.Sc	Basrah	2015
3- Calculating the carrier density in OCL and confined carrier occupation in quantum dot laser system type GaInAsP/Inp	M.Sc	Basrah	2017
4- Study of Effect Some Parameters of Quantum dot laser InGaAs/GaAs	M.Sc.	Basrah	2018
5- Theoretical study of the Photon – Assisted Polarization in InGaAs/GaAs Quantum dot laser	M.Sc.	Basrah	2021

EMPLOYMENT HISTORY التاريخ الوظيفي

Institution (place of work) مكان العمل	Period From	To	Job Title (Academic rank) الدرجة العلمية	Nature of Work* طبيعة العمل	Type of Work نوع العمل
Basra Univ. جامعة البصرة	2019	---	Professor أستاذ	Teaching تدريس	Full time رئيسي
Basra Univ. جامعة البصرة	2011	2018	Assistance Professor أستاذ مساعد	Teaching تدريس	Full time رئيسي
Basrah Univ. جامعة البصرة	2006	2010	Lecturer محاضر	Teaching تدريس	Full time رئيسي
Basrah Univ. جامعة البصرة	1998	2005	Assistance Lecturer مدرس مساعد	Teaching تدريس	Full time رئيسي

SCIENTIFIC RESEARCH البحوث العلمية

List of the research articles that have been published in referred journals

[1] Huda H. Noori and Ra'ed M. Hassan, Role of Non-Effective Intraband Relaxation Time on the Photon Assisted Polarization Amplitude in InGaAs/GaAs QD Laser, AIP Conference Proceedings 2591, 040018 (2023).

[2] Ra'ed M. Hassan and H. F. Hmood, Carrier Densities Population of QD in Ground and Excitation States of InGaAs/GaAs Quantum Dot Laser, IOSR Journal of Applied Physics 10 (5 Ver. II), 69-75, 2018

[3] CAE Qusay M. A. Hassan, H. A. Sultan, H. Bakr, Isra, a M. Ali, R. M. Hassan, Estimating the nonlinear refractive index of 10W30 oil using visible low power laser beam, Researcher 10 (1), 28 - 34, 2018

[4]] Qusay M. A., H. Bakr, H. A. Sultan and R. M. Hassan Evolution of far-field diffraction patterns and nonlinear optical properties of SAE 70 oil, International Journal of Applied and Natural Sciences (IJANS) 6 (4), 181-188, 2017

[5]] Ra'ed M. Hassan and E. Th. Shirshap, The confined carrier Level Occupies in QD, Carrier density in OCL and Threshold current Density Semiconductor of GaInAsP/InP QDL system, J. Basrah Researches ((Sciences)) 42 (2(B)), 145 – 160, 2017

[6] Ra'ed M. Hassan and E. Th. Shirshap, Effect of Surface Density and Mean Size of Quantum Dot on Properties of GaInAsP/InP QDL System, IOSR Journal of Applied Physics 8 (6), 1 – 11, 2016.

[7] RM Hassan, GM Ali, Role of System Parameters in Temperature Effect on Characteristic Temperature of Quantum Dot and Optical confinement layer of Quantum Dots Laser GaInAsP/InP, Basrah Researches ((Sciences)) 42 (1(B2)), 313-329, 2016.

[8] HA Sultan, CA Emshary, RM Hassan, Nonlinear Dynamics in the Output of VCSEL Under the Modulation of Injection Current, . Babylon University / Pure and Applied Science 24 (5), 1371-1377, 2016.

[9] RM Hassan, Attractor Behavior of Carriers Population and Photon-Assisted Polarization in Semconductor QDL, International Journal of Applied and Natural Sciences (IJANS) 1 (5), 19-30, 2016.

[10] RM Hassan, Quantum Dot Density Influence upon Coulomb Scattering Rates in Transition Stage and Steady State of QD Laser, Journal of American Science 12 (1), 2016.

[11] Ra'ed M. Hassan and Ghaith Munawar Ali, The Effect of Internal Losses on Characteristic Temperature and Quantum Dot Laser Characteristics with Presence / Absence Internal Absorption Losses, J. Basrah Researches ((Sciences)), under publishing, (2015).

[12] Dhia Saiwan and Raed M. Hassan, Temperature effect on the Characteristics of Quantum Dot Laser InAs/InGaAs with Wavlength 1.3 μm, J. Basrah Researches ((Sciences)), Vol.40, No.(3)B, pp.1-11 , (2014).

[13] Dhia Saiwan and Ra'ed M. Hassan, Control Dynamical Times of Quantum Dot Laser InAs/InGaAs Output at Wavelength 1.3 μm: Delay, Rise and Oscillation, J. Thi-Qar Science, Vol. 5, No.(1), A , pp.52-62, (2014).
[14] R M. Hassan, C. A. Emshary and H. A. Sultan, Effect of Surface Density of Quantum Dots on the QD Laser Characteristics, J. Thi-Qar Science, Vol. 4, No.(4), A , pp.160-166, (2014).
[15] R. M. Hassan, C. A. Emshary and S. I. Easa, Internal Loss andCharacteristic Temperatures of Quantum Dot Laser, J. Education College / Al- Mustansiriya University , Vol. 5, pp.100-113, (2012).
[16] R. M. Hassan, C. A. Emshary and S. I. Easa, Formalism of Coulomb Nonlinear Scattering rates in Semiconductor QD Microcavity, J. Education College / Al- Mustansiriya University , Vol. 3, pp.237-256, (2012).
[17] R. M. Hassan, C. A. Emshary and S. I. Easa, Turn –on Dynamic of Field and Photon – Assisted Polarization in InGaAs/GaAs QD Laser with Wavelength of 1.3 μm , J. Babylon University / Pure and Applied Science, Vol. 21, No.(1), pp.232-243, (2012).
[18] R. M. Hassan, C. A. Emshary and S. I. Easa, Turn –on Dynamic with Nonlinear Carriers Scattering Rates in InGaAs/GaAs QD Lasers , J. Babylon University / Pure and Applied Science, Vol. 20, No.(5), pp.232-243, (2012).

[19] R. M. Hassan, C. A. Emshary and S. I. Easa, Carrier Excitation Energies from QD to OCL, RMS of Relative QD-Size Fluctuations and Temperature Dependence of QDL , J. Thi-Qar Science, Vol. 3, No.(1), A , pp.146-156, (2011).
[20] Ra'ed M. Hassan, Microcavity Length Role on the Characteristic Temperature and the Properties of Quantum Dot Laser, J. Basrah Researches ((Sciences)), Vol.37, No.(4)A, pp.44-55 , (2011).
[21] R. M. Hassan, C. A. Emshary and S. I. Easa, Dynamical Delay Normalize of Master Equations Model of Semiconductor QD Lasers, J. Basrah Researches ((Sciences)), Vol.37, No.(1), pp.8-26 , (2011).
[22] SJ Kadaa, RM Hassan, HA Al-Eidany, Air pollution and environmental risks caused by vehicle exhaust in the province of Basrah, J. Maysan Academic Studies 7 (13), 128-135, 2008.
[23] Salah Sh. Al-L'aibi, Hussein F. H. Al-L'aibi, Ra'ed M. Hassan and Nada Sh. Addai, Conduction Mechanism study of Polyphenylene Sulfide doped with Ferric Chloride, J. Basrah Researches ((Sciences)), Vol.31, No.(1),pp.1-8 , (2005).
[24] Ra'ed M. Hassan, Instabilities and Chaos in Single – Mode CW Far – Infrared Lasers, J. Basrah Researches, Vol. 28, Part.(3), pp.223-232, (2002).
[25] Imad A. Al-Siadi and R. M. Al-Barburi, Mode – Splitting in Optically Pumped FIR Laser, J. Basrah Researches A 24, 101 – 115, 2000.
[26] Imad A. Al-Siadi and R. M. Al-Barburi, Nonlinear Spectroscopic Studies in Optically Pumped Three-Level Lasers , J. Basrah Researches A 24 (57), 57 - 67, 2000.
[27] Imad A. Al-Siadi and R. M. Al-Barburi, Effect of Detuning of the Pump Field on the Features of the Optically Pumped FIR Lasers , J. Basrah Researches A 17, 29 - 42, 1999.

Published Book

Published Book الكتب المنشورة

RM Hassan, CA Emshary, I Easa , Quantum Dot Laser: Turn-on Dynamics and the Operation Characteristics, LAP LAMBERT Academic Publishing, 2016.