

C.V



Name: Hammad R. Humud

Date of Birth: 1960

Martial statues:Married

Specialization:Physics /Laser and Optoelectronics

Position: Professor

Scientific Degree: Professor

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■ **First, Scientific Certification:**

| Degree science | University | College | Date |
|-----------------------|-------------------|---------------------------|-------------|
| B.Sc. | AI-Mustansria | Science | 1981 |
| M.Sc. | Technology | school of Applied Science | 1986 |
| Ph.D. | Baghdad | Science | 1998 |

■ **Second Courses Which You Teach:**

| No. | Subject |
|-----|---------------------------------------|
| 1 | Photo-Communication's throw air (MSc) |
| 2 | Thermodynamic Physics (BSc) |
| 3 | Laser Physics |
| 4 | Optics |
| 5 | Atomic Physics |
| 6 | Electromagnetic Theory |
| 7 | Fundamentals Physics |
| 8 | Surface Analysis |
| 9 | Laser plasma interaction/MSc |
| 10 | Digital and logic electronics |
| 11 | Research Methodology for PhD students |

■ **Third, Thesis which was supervised by :**

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| No. | Thesis Title | Year |
|-----|--|------|
| 1 | SiC thin film preparation by TEACO ₂ laser induced vapor-phase reaction and study of their electrical and optical properties | 2000 |
| 2 | Effect of doping on the optical and electrical properties of the SiC thin films prepared from the induced vapor-phase reaction with TEACO ₂ laser | 2001 |
| 3 | Design and construction of laser scanner | 2001 |
| 4 | Ceramic thin film deposition by laser induce vapor-phase | 2002 |
| 5 | Design and construction of laser scanner using computer-generated holograms | 2002 |
| 6 | A study of a detection assembly for guiding missiles | 2002 |
| 7 | Optical fiber identifier design and construction | 2002 |

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| 8 | Preparation of photodetector CdS:Cu/Si by spray pyrolysis technique | 2003 |
| 9 | The influence factors on semiconductor laser transmitter system through atmosphere | 2003 |
| 10 | Video orientation control mechanism by applying optical fibers | 2004 |
| 11 | An-analytical study on a laser detection and tracking system | 2005 |
| 12 | Using the high intense pulse light for hair removal | 2006 |
| 13 | Generation and characterization of the plasma needle | 2013 |
| 14 | Developing a low temperature non thermal plasma jet suitable for treatment temperature sensitive materials | 2014 |
| 15 | Preparation of metals nanoparticles (Cu, Al, Ag) by the exploding wire technique in different liquids and its characterization | 2014 |
| 16 | Plasma deposition of polyaniline silver nanocomposite thin films | 2014 |
| 17 | Characterization of polyaniline and polythiophene thin films deposited by plasma technology | 2015 |
| 18 | Synthesis of carbon films by microwave plasma-enhanced chemical vapor deposition | 2015 |
| 19 | Influence of Ag nanoparticles on optical properties of laser dye impeded in PMMA polymerized by plasma jet | 2016 |
| 20 | Construction and study of atmospheric plasma jet induced by microwave | 2016 |
| 21 | Linear and non-linear optical properties of Ag/PMMA nanocomposite films prepared by aerosol assisted dielectric barrier discharge plasma jet polymerization | 2016 |

Fourth, Published Articles

| No. | Research Title | Place of Publication | Year |
|-----|---|--|------|
| 1 | Formation silicon nitride powder from gas phase by laser induced chemical vapor deposition and study their properties | First ceramic materials conference and its application in engineering 24 Feb.p15 | 2000 |
| 2 | Structural and Electrical Properties of SiC Thin Film Prepared by Laser Induced Chemical Vapor Deposition (LICVD). | Journal of the College of Education for Women, Vol. 3, No.11, P.34 | 2000 |

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| 3 | The Study of the Optical Properties of SiC Prepared by Chemical Vapor Deposition Induced by Laser; | Proceeding of the MCE 3 ^{ed} Science Conference, P. 323 | 2000 |
| 4 | Silicon Nitride Powder Formation from Nitration Silicon Powder Synthesis by Laser Radiation | Iraqi Journal of Science.vol.42, no.1, P1 | 2001 |
| 5 | SiC Powder formed from Chemical Vapor Deposition. | Journal of the College of Education/Al-Mustanseria University.Vol.1, No.1, P307 | 2001 |
| 6 | The Study of Structural Properties and the Optical Energy Gap of SiC Films doped with Nitrogen. | Journal of the College of Education for Women.vol12, no.4 , P496 | 2001 |
| 7 | Multiple Photon Absorption Spectrum and Multiple Photon Dissociation Assisted by Collision of C ₂ H ₄ . | Iraqi Journal of Science, Vol. 42, No.3, P.1. | 2001 |
| 8 | Formation Silicon Carbonitride Thin Film from Chemical Vapor Deposition Induced by TEA CO ₂ Laser and Study its Optical Properties. | Iraqi Journal of Physics, Vol.1, No. 1, P.8 | 2002 |
| 9 | Formation ceramics films from centering of SiCN powder papered from gas phase enhanced by Laser; | Iraqi Journal of Physics.Vol.2, No.1, P.7-12 | 2003 |
| 10 | Design and Contraction double prism Laser Scanner. | Iraqi Journal of Science.Vol.43, No. 1, P16 | 2003 |
| 11 | FT-1R and XPS Analysis of a-Si _{1-x} Ge _x :H Thin Films | Renewable Energy Vol. 28, P.975. | 2003 |
| 12 | New Method Using a Transverse Opto-Electronic Effect (Pockel Effect) to transfer an Acoustic Signal. | Iraqi Journal of Physics. Vol.2, No. 2, P.1 | 2003 |
| 13 | Calculated the Half Wave Voltage for An Electro-Optic Modulator System Consist of LiNbO ₃ Crystal at 0.81 μm Wavelength. | Iraqi Journal of Physics, Vol.3, No. 1, P.1. | 2004 |

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| 14 | Design and construction pulse light system coupled with cooling for hair removal | Journal of Babylon University/ Science and its Application. Vol.14, No.3, pp319- | 2007 |
| 15 | Generation of Off-axis and Circular Computer Holograms for Laser Scanner. | Fondazione Giorgio Ronchi; Anno LXIV, n,2-Marzo-Aprile pp.215-223 | 2009 |
| 16 | Optical properties of silicon nitride thin films deposited by TEACO ₂ laser induces chemical vapor deposition | Journal of Kerbala University, Vol,7,No,4Scientific | 2009 |
| 17 | Investigation of doping effect on properties of chemically sprayed CdS films | Journal of Al-Nahrain University- Science, vol. 14, no.2, pp1-5 | 2011 |
| 18 | Nanocrystalline β -Silicon Carbide Films Prepared by TEACO ₂ Laser | Iraqi Journal of Physics, 2011, Vol. 9, No.15, PP. 14-17 | 2011 |
| 19 | Transfoculation Technique to Overcome Atmospheric Scintillation Effect on a Laser Detection and Tracking System (LDTS) | Iraqi Journal of Physics, 2011, Vol. 9, No. 14, PP.70-75 | 2011 |
| 20 | Strain specificity in antimicrobial activity of non-thermal plasma | Iraqi Journal of Physics, 2013 Vol.11, No.20, PP. 110-115 | 2013 |
| 21 | Argon plasma needle source | Iraqi Journal of Physics, 2012 Vol. 10, No.17, PP. 53-57 | 2012 |
| 22 | Nanostructured polyaniline thin films prepared by plasma polymerization at atmospheric pressure | Physical Sciences Research International Vol. 1(4), pp. 110-122, November 2013 | 2013 |
| 23 | <i>Characterization of Argon Plasma Induced by Simple 2.45 GHz Microwave Source</i> | International Review of Physics, vol.7 No.1, 65-70 | 2013 |
| 24 | Deactivation of Staphylococcus Aureus and Escherichia Coli using Plasma Needle at Atmospheric Pressure | International Review of Physics, vol.7 No.1, 40-44 | 2013 |

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| 25 | Low temperature atmospheric pressure plasma jet | International Journal of Current Engineering and Technology | 2014 |
| 26 | Silver nanofluids prepared by pulse exploding wire | Asian Academic Research Journal of Multidisciplinary | 2014 |
| 27 | Characterize of silver polyaniline nanocomposite thin films prepared by aerosol assisted dielectric barrier discharge plasma jet polymerization | Asian Journal of Applied Science and Engineering, Vol.3, (4) 2014, p 25 | 2014 |
| 28 | Optical properties of silver polyaniline nanocomposite prepared by plasma jet polymerization. | Asian Academic Research Journal of Multidisciplinary, vol. 1 (27) 2014, p | 2014 |
| 29 | Effect of iodine doping on the characterize of polyaniline thin films prepared by aerosol assisted plasma jet polymerization at atmospheric pressure | International Journal of Current Engineering and Technology, Vol. 4(5) October 2014 p3405 | 2014 |
| 30 | The effect of gamma irradiation on the energy gap of polyaniline thin films prepared by non thermal plasma jet | Asian Journal of Applied Science and Engineering, Vol.3, (7) 2014, p 16 | 2014 |
| 31 | Electrode configuration effect on some properties of low temperature plasma jet (ATPJ) | International Journal of Current Engineering and Technology Vol 4(4)p2580 | 2014 |
| 32 | Effect of iodine doping on the characteristics of polythiophene thin films prepared by aerosol assisted plasma jet polymerization at atmospheric pressure | Iraqi J. of Physics, Vol. 12 (24)2014 | 2014 |
| 33 | Gas flow rate effect on the nonlinear optical properties of Ag/PMMA nanocomposite thin films prepared by aerosol assisted dielectric barrier discharge plasma jet polymerization | International Journal of Current Engineering and Technology, vol.5, no.5, 3310 | 2015 |

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| 34 | Copper nanoparticles prepared by pulsed exploding wire | Iraqi J. of Physics, Vol. 13 (26) | 2015 |
| 35 | Spectroscopic measurements of the electron temperature in low pressure microwave 2.45GHz argon plasma | Iraqi J. of Physics, Vol.13, no.(27), 14-23 | 2015 |
| 36 | Laser- induced modification of Ag and Cu metal nanoparticles formed by exploding wire technique in liquid | Iraqi J. of Science, Vol.56, no.(4B), 3135-3140 | 2015 |
| 37 | Polyaniline/TiO ₂ nanocomposite thin films prepared by microwave plasma. | Journal of Wasit for Science and Medicine, vol.8, no.3, 143-149. | 2015 |
| 38 | Evaluation the non-thermal plasma application activity in AFB1 detoxification | Journal of Biology, Agriculture and Healthcare, vi. 5, no. 24, 100-104 | 2015 |
| 39 | Aerosol assisted dielectric barrier discharge plasma jet for Silver\ PMMA nanocomposite thin films preparation | Eng. &Tech.Journal, Vol.33, Part (B), No.7. 1273 | 2015 |
| 40 | Effect of Ag nanoparticles on R6G laser dye hosted by PMMA polymerized by plasma jet | Iraqi Journal of Physics, Vol. 14, no. 29, 27-36 | 2016 |
| 41 | Nonlinear Optical Properties of Pure and Ag/Polyaniline Nanocomposite Thin Films Deposited by Plasma Jet | Iraqi Journal of Science 57 (2C, pp:1408-1414), ,1408-1414 | 2016 |
| 42 | XRD and FTIR studies for Ag/PMMA Nano composite thin films | International Journal of Computation and Applied Sciences IJOCAAS Vol. 1, Issue 2, OCTOBER 2016 Pp22-27 | 2016 |

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| 43 | Synthesis of Nanostructure Carbon Thin Films by Microwave Plasma-Enhanced Chemical Vapor Deposition | eBook Collection (EBSCOhost) - printed on 12/12/2016 9:09 AM via LINKOPING UNIV LIBRARY vol 3 pp 67-76 Publisher | 2016 |
| 44 | Tooth bleaching by plasma jet assisted by hydrogen peroxide and water | Der Pharmacia Lettre vol8 pp 229-233 Scholar Research Library 2016 | 2016 |
| 45 | Structural and Optical Properties of Copper Iodide Nanoparticles Synthesized by Electro - Explosion of Wire | Journal of Chemical and Pharmaceutical Research 9 (1), 31-36 | 2017 |
| 46 | Optical emission spectroscopy for studying the exploding copper wire plasma parameters in distilled water | Iraqi Journal of Physics (IJP) 15 (35), 142-147 | 2017 |
| 47 | Laser-induced photodeposition of silver nanoparticles on the optical fiber vertex for refractive index measurement relied on localized surface plasmon resonance | AIP Conference Proceedings 2045 (1), 020013 | 2018 |
| 48 | Synthesis of Au-Ag-Cu trimetallic alloy nanoparticles prepared by electrical exploding wire technique in distilled water | Iraqi Journal of Physics 16 (39), 81-92 | 2018 |
| 49 | Measurement of Optical, Morphological, and Structural Properties of PMMA/Fe ₂ O ₃ Nanocomposite Thin Films by plasma jet | | 2017 |
| 50 | Characterization of copper iodine thin films fabricate by spin coating from nanoparticles produced by exploding Cu wire in Iodine solution | International Journal of ChemTech Research 10 (9), 1109-1116, | 2017 |
| 51 | Structure and optical properties of PANI/MWCNTs nanocomposites thin films prepared by plasma jet polymerization | Iraqi Journal of Physics (IJP) 15 (34), 55-64 | 2017 |

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| 52 | PANI/MWCNT based humidity sensor | Iraqi Journal of Physics (IJP) 15 (33), 111-121 | 2017 |
| 53 | Effect of plasma jet on the water and hydrogen peroxide that used for assisted teeth bleaching | Iraqi Journal of Physics 15 (34), 29-35 | 2017 |
| 54 | Preparation of Polyaniline/Zinc Oxide Nanocomposite Thin Films by Microwave Plasma | International Journal of ChemTech Research 10 (No.5, pp 886-892.), pp 886-892 | 2017 |
| 55 | Synthesis of Nanostructure Carbon Thin Films by Microwave Plasma-Enhanced Chemical Vapor Deposition | 3rd International Multidisciplinary Microscopy and Microanalysis Congress | 2017 |
| 56 | Treatment of Antibiotics, Resistant Candida albicans Using Cold Atmospheric Plasma Jet | <i>Indian Journal of Natural Sciences</i> www.tnsroindia.org.in ©IJONS Vol. 9 / Issue 50 /October 2018 | 2018 |
| 57 | Optical Fiber Sensor Based on Local Surface Plasmon Resonance to Measured Refractive Index | Indian Journal of Natural Sciences www.tnsroindia.org.in ©IJONS Vol.8 / Issue 46 / February 2018 | 2018 |
| 58 | Solar vapor generation under concentration illumination using carbon black | IOP Conf. Series: Journal of Physics: Conf. Series 1279 (2019) 012001 | 2019 |
| 59 | Electrical Properties of Copper Iodine Prepared by Exploding Wire | Karbala International Journal of Modern Science 5 (2019) 146e150 | 2019 |
| 60 | Synthesis of Au –Ag– Cu trimetallic alloy nanoparticles prepared by electrical exploding wire technique in distilled water | Iraqi Journal of Physics, 2018 Vol.16, No.39, PP. 81-92 | 2018 |

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| 61 | Synthesis of core-shell Fe ₃ O ₄ -Au nanoparticles by electrical exploding wire technique combined with laser pulse shooting | Optics and Laser Technology 111 (2019) 720–726 | 2019 |
| 62 | Signature of plasmonic nanoparticles in multi-wavelength low power random lasing | Optics and Laser Technology 121 (2020) 105770 | 2020 |

■ Fifth , Published Books

| No. | Scientific Literature Title | Year of The Publication |
|-----|----------------------------------|-------------------------|
| 1 | Introduction to Laser Technology | 2010 |

■ Sixth, languages:

✓ English Language

■ Seventh, Iraqi Patents:

| | Patent title | No. of Patent | Year |
|---|---|---------------|------|
| 1 | استخدام طريقة بسيطة وحديثة لتحضير اغشية SiC المشوبة بالنيتروجين ذات سمك عالي الانتظام باستخدام الليزر TEA-CO ₂ | 3150 | 2002 |
| 2 | تصميم منظومة بلازما محمولة ذات شعلة بطول 37 ملم صغيرة الحجم وخفيفة الوزن مصنوعة من مكونات تجارية غير مكلفة | 4252 | 2015 |