



C.V

Professor. Dr/ Ibrahim Sayed Mohammed Hussein

Scientific name : (I.S. Yahia)

Head of the Nanoscience Laboratory for Environmental and Bio-medical Applications
(NLEBA), Physics Department, Faculty of Education, Ain Shams University, Roxy,
Cairo, Egypt.

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(1997-2021)

1-Personal Details

Date of birth: 15/2/1975.

Nationality: Egyptian.

2-Languages

Arabic and English

3-Educational Qualification and Administrative

1. BSc, (Physics & Chemistry), Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 1997.
2. General Diploma in Physics, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 1998.
3. Special diploma in Physics, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 1999.
4. MSc., "A Study of Some Transport Properties of Zn-based Semiconductors", Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 2003.
5. PhD., "Study of some transport properties of some semiconductor titanium oxides, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 2007.
6. Associate Professor of Semiconductor Physics and Nanomaterials, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 25-11-2012 until now.
7. Assistant Professor of Semiconductor Physics and Nanomaterials, Physics Department-Faculty of Science-King Khalid University, 22-08-2012 to 1-10-2015.
8. Associate Professor of Semiconductor Physics and Nanomaterials, Physics Department-Faculty of Science-King Khalid University, 1-10-2015 till now.
9. A Distinguished Professor at King Khalid University, March 2017.
10. Professor of Material Science and Nanomaterials Engineering, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt, 27-1-2018 until now.
11. Head of **Nanoscience Laboratory**, Physics Department, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt, through 2011-2016.

12. Head of **The Nanoscience Laboratory for Environmental and Bio-medical Applications (NLEBA)**, Physics Department, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt, through 2016-2021.

13. Head of **Advanced Functional Materials & Optoelectronic Laboratory (AFMOL)**, Department of Physics, Faculty of Science, King Khalid University, Abha, Saudi Arabia, through 2012-2021.

4. Current Position

Professor of Semiconductors and Nano-materials Technology, Physics Department, Faculty of Science-King Khalid University, 1-10-2015 until now.

5- Teaching Courses and reports

5-1. Courses in Ain Shams University

1. Solid-state physics.
2. History of physical science.
3. Electricity and magnetism.
4. Alternating current.
5. Semiconductors.
6. Electronics I, II.
7. Electric circuits.
8. Modern Physics.

5-1. Courses at King Khalid University

1. Atomic Physics and spectra (KKU University).
2. Introduction to Physics (KKU University).
3. Nuclear physics (II) (KKU University)
4. Electromagnetic theory (I) (KKU University).
5. Solid-state Physics (II) (KKU University).
6. Optics and Laser (KKU University).
7. Vibrational and Waves (2), (KKU University).
8. Advanced Lab. For Master students (KKU University).
9. Special Course for Master students (Faiza El-Amri) ((KKU University).

10. Special Course for Master students (Amn El-Khatany) ((KKU University).
11. Special Course for Master students (Fatem El-Rajhai) ((KKU University).
12. Special Course for Master students (Suda El-Amri) ((KKU University).
13. Special Course for Master students (Manal El-Shadidi) ((KKU University).
14. Advanced Laboratory for Master student ((KKU University).

6-Journals Scientific editorial board

- 1- Managing Editor of (Organo Opto-Electronics) funded by Dr. Ibrahim Hussein
- 2- Associate Editor in (Advances in Materials and Corrosion).
- 3- Associate Editor (Frontiers in Thin Solid Film) & Review Editor (Frontiers in Thin Solid Film).
- 4- Editorial board in (New Horizons in physics).
- 5- A technical editor in (Turkish Journal of Engineering).
- 6- Associate Editor in 'COJ Electronics and Communications'
- 7- Editorial board member: «GELIOTEKHNİKA» / «APPLIED SOLAR ENERGY»
- 8- Editorial board member: JOURNAL OF MATERIALS, AND ELECTRONIC DEVICES.
- 9- Honorary Member of the Hon'ble Editorial Board of the IJBST Journal Group, <http://board.ijbst.org/>
- 10- as a member of the Editorial Board, Journal of Mineral, Metal and Material Engineering.
- 11- Editorial board member: Journal of Solar Energy Research Updates.
- 12- Editorial board member: International Journal of Robotics and Automation Technology
- 13- Editorial board member: World Journal of Textile Engineering and Technology
- 14- Editorial board member: Journal of Advanced Thermal Science Research
- 15- Reviewer in Polymers, (3.426 impact factor)
- 16- Editorial board member: Journal of Basic & Applied Sciences
- 17-

7- Scientific community

- 1- Member of Egyptian Material Science Society.

- 2- Member of Egyptian Crystal Science Society and its Applications.
- 3- Member of Egyptian Syndicate of Scientific Professions.
- 4- Member of Saudi Physics Society (Representative of KKU in Saudi Physics Society), Saudi Arabia.
- 5- Saudi Society for Nanotechnology.
- 6- Member of Research Center for Advanced Materials Science (RCAMS), Centre of Advanced Materials, King Khalid University, Saudi Arabia.
- 7- Consultant at the Research Center for Advanced Materials Science (RCAMS), Centre of Advanced Materials, King Khalid University, Saudi Arabia, 2018-2021.
- 8- Member of Research chair of Exploitation of Renewable Energy Applications in Saudi Arabia, Physics & Astronomy Dept., College of Science, King Saud University, Saudi Arabia.
- 9- Member of Egyptian Chemical Society.

8- Scientific Research Groups & projects in Ain Shams University & King Khalid University.

- 1- Head of **The Nanoscience Laboratory for Environmental and Bio-medical Applications (NLEBA)**, Physics Department, Faculty of Education, Ain Shams University, Roxy, Cairo, Egypt, through 2011-2016.
- 2- Head of **Advanced Functional Materials & Optoelectronic Laboratory (AFMOL)**, Department of Physics, Faculty of Science, King Khalid University, Abha, Saudi Arabia, through 2012-2021.
- 3- Consultant at the Research Center for Advanced Materials Science (RCAMS), Centre of Advanced Materials, King Khalid University, Saudi Arabia, 2018-2021.
- 4- Consultant in the project entitled: **(Highly Efficient Quantum Dots Sensitized Solar Cells (QDSSCs) Based on Nano-Metal Oxide Semiconductors)** funded by Science, Technology, and Innovation (KACST), Saudi Arabia, P. Investigator Dr. W. Aslam Farooq, Physics and Astronomy Department, Faculty of Science, King Saud University, Riyadh, KSA.

5- Co-investigator in the project entitled: **(Preparation of Luminescent Polymer Nano-composites to Enhance Solar Energy Electrical Conversion Efficiency and Green-house Lighting)** funded by Princess Nora Bint Abdul Rahman University, Faculty of Science, Physics Department, Riyadh, Saudi Arabia, September 2013-2015.

3- Co-investigator in the project entitled: **(Preparation of highly Efficient Luminescent Nano-composites for the optical sensor: Applications and Enhancing the Efficiency of Solar cells)** funded by Princess Nora Bint Abdul Rahman University, Faculty of Science, Physics Department, Riyadh, Saudi Arabia, September 2015.

4-Co-investigator in the project entitled: **(Decorating the dyed poly-methyl methacrylate (PMMA) with nano-particles of Nobel metals for UV sensing)**, NAJLAN UNIVERSITY Promising Centre for Sensors and Electronic Devices (PCSED) started (January 2014-2016).

5- Co-investigator in the project titled: **Synthesis and characterization of Molybdenum doped hydroxyapatite nanostructure by microwave/hydrothermal technique for bone tissue engineering**, P. Investigator Dr. Mymouna Abutalib, Physics Department, Faculty of Science-AL Faisaliah, Campus, King Abdulaziz University, KSA., funded by King Abdulaziz University (Excellent study), 2016.

6- Co-investigator in the project titled: **Synthesis and characterization of (Al, Ag, Zn) co-doped Mn: PbI₂ nanostructure for gamma radiation detectors**, P. Investigator Dr. Mymouna Abutalib, Physics Department, Faculty of Science-AL Faisaliah, Campus, King Abdulaziz University, KSA., funded by King Abdulaziz University (General program), 2016.

7- Co-investigator in the project entitled: **Innovation of Smart Windows Based on Solar Energy Conversion: Towards Efficient Energy Buildings**, funded by Science, Technology, and Innovation (KACST), Saudi Arabia, P. Investigator Dr. Samah El-Bashir, Physics and Astronomy Department, Faculty of Science (girl section), King Saud University, Riyadh, KSA., 2016.

9. **I.S. Yahia, PI (Head of The General Program Group), Synthesis of W-doped hydroxyapatite nanorods for bone cement engineering by sol-gel/microwave hydrothermal technique: Characterization and bioactivity**, at King Khalid University, 4-11-2016.
10. **I.S. Yahia, PI (Head of The General Program Group)**, Nanostructure synthesis of KI-doped hydroxyapatite (HAp) for bone cement engineering and biomedical applications, Deanship of Scientific Research, King Khalid University, 4-10-2017.
11. **I.S. Yahia, Co-PI**, Organic Semiconductors for advanced technology (OSAT), Physics Department, Faculty of Science, King Khalid University, Abha, KSA, 2018, PI- Dr. Mohamed Assiri, Chemistry Department, Faculty of Science, King Khalid University, Funded by King Khalid University (Research group R.G.P.1/22/38).
12. Co-investigator in the project entitled: **The photocatalytic performance study of the oxygen-defected metal-oxides nano-crystals**, No. MS-36-104, funded by Science, Technology, and Innovation (KACST), Saudi Arabia, P. Investigator Dr. Mohamed Hamady, Chemistry Department, Faculty of Science, King Khalid University, Abha, KSA, 2017-2018.
13. **I.S. Yahia, PI (Head of The Smart Carbon Nanomaterials (SCN) Group**, Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia, 2017.
14. **I.S. Yahia**, A Co-PI in the “**Quantum Functional Materials for Advanced Applications (QFMAA) Group**” in King Khalid University, Abha, Saudi Arabia, 2017, The P.I. of the Group Dr. Salem Elfaify.
15. **I.S. Yahia**, A Co-PI of “**Wastewater treatment (WWT) Group**” in King Khalid University, Abha, Saudi Arabia, 2017, The P.I. of the Group Prof. Dr. Nasser Awwad.
16. Co-investigator in the project titled: **Selective CUT-OFF laser filters based on brilliant green/PMMA polymeric composite films**, P. Investigator Dr. Mymouna Abutalib, Physics Department, Faculty of Science-AL Faisaliah, Campus, King Abdulaziz University, KSA., funded by King Abdulaziz University (Excellent study), 2017.

17. **I.S. Yahia**, A consultant Treatment of wastewater contains some heavy metals cations in populated areas with those pollutants, Joint in Project, Funded by the strategic plan projects for postgraduate studies and research, Ain Shams University, 2017-2019, PI-Dr. Mai Saleh Hussein.
18. **I.S. Yahia**, A Co-PI of “**Organic Semiconductors for advanced technology (OSAT) Group**”, Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia, 2017, The P.I. of the Group Dr. Mohamed Assiri.
19. **I.S. Yahia**, A Co-PI in the “**Biomedical Materials for Medical Applications (BMMA) Group**” Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia, 2017, The P.I. of the Group Dr. Obid Bilim.
20. **I.S. Yahia**, A Co-PI, Synthesis and Characterization of Ga- and Y- doped HAp nano-structured for bone cement engineering, Physics Department, Faculty of Science, King Khalid University, Abha, KSA, 2018, Funded by Deanship of Scientific Research, King Khalid University (general program)
21. P-investigator in the project entitled: **Production of multifunctional cotton fabric based on Hydroxyapatite and Graphene oxide nanoparticles for medical applications**, No. MS-37-120, Co-Investigator Dr. Sherif Keshk, Deanship of Scientific Research, King Khalid University, Abha, KSA, 2017-2018.
22. **I.S. Yahia**, PI (Head of The Research Group), Design of new material for storage materials and advanced technology, New approach, Deanship of Scientific Research, King Khalid University, 9-8-2018.
23. **I.S. Yahia**, PI (Head of The Research Group), Study the optical and electrical properties of new organic semiconductors for electro-optical applications, at Research Center for Advanced Materials Science, King Khalid University, 11-2-2018.
24. **I.S. Yahia**, Co-PI, Multifunctional nanomaterials for biomedical and environmental applications, Deanship of Scientific Research, King Khalid University, 17-2-2018.
25. Co-investigator in the project entitled: **Production of multifunctional cotton fabric based on nanostructure graphene oxide with/without silver for medical applications**, P-Investigator Dr. Sherif Keshk, Deanship of Scientific Research,

- King Khalid University, Riyadh, KSA, 2018, Funded by King Khalid University (general program).
26. **I.S. Yahia, PI (Head of The Research Group)**, Settlement new trends in King Khalid University for designing metal oxides, metal chalcogenides, organic and bio-medical materials wide-scale application in device technology, at Research Center for Advanced Materials Science, King Khalid University, 4-10-2018.
 27. **I.S. Yahia, Co-PI**, Optical linearity and nonlinearity of basic fuchsin dye thin films deposited on different substrates for electronic and optoelectronic devices, The P. Investigator is Dr. Mymouna Abutalib, Physics Department, Faculty of Science-AL Faisaliah, Campus, King Abdulaziz University, KSA., funded by King Abdulaziz University (general program), 2018.
 28. **Extension: I.S. Yahia, PI (Head of The Research Group), The Smart Carbon Nanomaterials (SCN) Group**, Deanship of Scientific Research, King Khalid University, Abha, Saudi Arabia, 2019.
 29. **I.S. Yahia, PI (Head of The Research Group)**, Smart Superparamagnetic Nanoparticles for Theranostics in Personalized Oncology, Deanship of Scientific Research, King Khalid University collaboration with Southern Federal University, 2019.
 30. **I.S. Yahia, PI (Head of The Research Group)**, Fabrication of new Kersterite materials doped with some rare earth and magnetic elements for electronic and optoelectronic applications, Deanship of Scientific Research, King Khalid University, 2019.
 31. **I.S. Yahia, PI (Head of The Research Group)**, Design of novel polymeric films for varistor electronic devices applications, Deanship of Scientific Research, King Khalid University, in collaboration with Najran University, 1-4-2019.
 32. **I.S. Yahia, Co-PI**, Multifunctional nanomaterials for biomedical and environmental applications, Deanship of Scientific Research, King Khalid University, 10-3-2019.

33. **I.S. Yahia, PI (Head of The Research Group)**, The nanometric green synthesis of copper oxide inoculated with rare earth elements for advanced technological applications, Deanship of Scientific Research, King Khalid University, 2019.
34. **I.S. Yahia, PI (Head of The Research Group)**, Nanoscale synthesis and fabrication of metal-doped ZnO: Smart materials for device applications, Deanship of Scientific Research, King Khalid University in collaboration with Swansea University, 2019.
35. **I.S. Yahia, Co-PI**, Metal oxides and alloys design for advanced applications, Deanship of Scientific Research, King Khalid University, 10-3-2019.
36. **I.S. Yahia, Co-PI**, Design and fabrication of organic and/or inorganic thin films using cost-effective technology, Deanship of Scientific Research, King Khalid University, 10-3-2019.
37. **I.S. Yahia, PI (Head of The Research Group)**, Large-Scale production of graphene nanosheets as multifunctional smart materials, Deanship of Scientific Research, King Khalid University, 20-8-2020.
38. **I.S. Yahia, PI (Head of The Research Group)**, Towards the realization of the circular economy: Innovative environmental solutions using inexpensive plastic waste residuals to fabricate graphene and its nanocomposites derivatives for technological, environmental and biomedical applications, at Research Center for Advanced Materials Science, King Khalid University, 17-3-2020.
39. **I.S. Yahia, Co-PI**, Organic semiconductors for photonic and electronic devices, Deanship of Scientific Research, King Khalid University, 7-5-2020.
40. **I.S. Yahia, Co-PI**, Multifunctional smart polymeric nanocomposites for the next-generation electronic and optoelectronic devices using cost-effective technology, Deanship of Scientific Research, King Khalid University, 25-3-2020.
41. **I.S. Yahia, Co-PI** (Novel nanocomposite structure materials for magneto-optics, optoelectronic devices and gas sensor for environmental monitoring) Research Center for Advanced Materials Science (RCAMS), King Khalid University for funding this work under grant number RCAMS/KKU/015-20.
42. **I.S. Yahia, PI (Head of The Research Group)**, Metal oxides, metal chalcogenides, and ferrites doped with graphene for environmental and biomedical

- applications, Deanship of Scientific Research, King Khalid University, 25-1-2021.
43. **I.S. Yahia, CoPI** (Novel nanocomposite structure materials for magneto-optics, optoelectronic devices and gas sensor for environmental monitoring) Research Center for Advanced Materials Science (RCAMS), King Khalid University for funding this work under grant number RCAMS/KKU/015-20.
 44. **I.S. Yahia, Co-PI**, (Kramers-kronig relations for optical constants (KKROC)), Deanship of Scientific Research, King Khalid University, RGP2/50/40.
 45. **I.S. Yahia, Co-PI**, (Nanocomposite Materials for Varistor and Optical limiting devices (NMVOD)), Deanship of Scientific Research, King Khalid University, RGP2/103/41

9- Scientific Visiting.

46. To the Semi-magnetic Semiconductor Lab., Institute of Physics, Polish Academy of Science, Warsaw, Poland (December 2004-February 2005).
47. To The Semi-Magnetic Semiconductor Lab., Institute of Physics, Polish Academy of Science, Warsaw, Poland (May 2008 - November 2008) (PAROWN GRANT) awarded from Egypt.
48. To the Electronic Materials Laboratory - Physics Department, Faculty of Science and Arts, Firat University - Elazig, Turkey, (June 210 - December 2010), TUBITAK Grant (The Scientific and Technological Research Council of Turkey) awarded from Turkey.
49. To the GROUP OF PHYSICS OF QUANTUM STRUCTURES, Institute of Physics, Polish Academy of Science, Warsaw, Poland, (15-29 September 2010).
50. To the GROUP OF PHYSICS OF QUANTUM STRUCTURES, Institute of Physics, Polish Academy of Science, Warsaw, Poland (17 July to 16 August 2011).
51. To the Electronic Materials Laboratory-Physics Department, Faculty of Science and Arts, Firat University - Elazig, Turkey, (16-22 January 2014).
52. To the GROUP OF PHYSICS OF QUANTUM STRUCTURES and the Semi-magnetic Semiconductor Lab., Institute of Physics, Polish Academy of Science, Warsaw, Poland, (14 June to 14 August 2014).

53. To the Electronic Materials Laboratory - Physics Department, Faculty of Science and Arts, Firat University - Elazig, Turkey, (14 August to 24 August 2014).
54. To the Center of Nanotechnology, King Abdulaziz University (KAU), 12-14 November 2014, DSSC solar cell lecturers. Jeddah, KSA.
55. To the Center of Nanotechnology, King Abdulaziz University (KAU), 4-6 December 2014, Organic sensors lectures, Jeddah, KSA.
56. To the Center of Nanotechnology, King Abdulaziz University (KAU), 31 January - 2 February 2015, consulting small projects, Jeddah, KSA.
57. To The Physics Department, Faculty of Science, King Saud University, Riyadh, Saudi Arabia, Consulting time for the running project in QDSSCs, 7-13 February 2015.
58. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 7 June - 11 August 2015, consulting of small projects, building Wet Chemical Lab, training staff in nano/bio-medical materials: synthesis and characterization, Jeddah, KSA.
59. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 10-13/12/2015 June, consulting small projects, Jeddah, KSA.
60. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 21-24/1/2016, consulting small projects, Jeddah, KSA.
61. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 21-24/9/2016, consulting small projects, Jeddah, KSA.
62. To the Centre of Nanotechnology/Physics Department, Faculty of Science, King Abdulaziz University (KAU), 24-25/4/2017, Reviewer for the Master Thesis, Jeddah, KSA.
63. To the Centre of Nanotechnology/Physics Department, Faculty of Science, King Abdulaziz University (KAU), 4-7/10/2017, Reviewer for the Master Thesis, Jeddah, KSA.
64. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 8-11/11/2018, consulting small projects, Jeddah, KSA.
65. To Physics Department, Faculty of Education, Ain Shams University, Head of the 1st-Workshop on Nanomaterials for Environmental and Bio-medical Applications, 28-December 2018.

66. To the Faculty of Education, Ain Shams University, Opening ceremony of the Nanoscience Laboratory for Environmental and Bio-medical Applications (NLEBA), Physics Department, Faculty of Education, El-Khalifa El-Maamoun Str., Roxy, Cairo, Egypt.
67. To the Physics Department, Faculty of Science, King Saud University, Centre of Nanotechnology, 20 January 2019, Riyadh, KSA.
68. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 13-15 May 2019, Jeddah, KSA.
69. To the Institute of Smart Materials, Southern Federal University, Rostov, Russia, 10-17 March 2019.
70. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 3-7 December 2020, Jeddah, KSA.
71. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 25-28 March 2021, Jeddah, KSA.
72. To the Department of Physics (Solar cell group), Faculty of Science, King Saud University, Riyadh, 9-11 April 2021, Jeddah, KSA.
73. To the Centre of Nanotechnology, King Abdulaziz University (KAU), 6-9 May 2021, Jeddah, KSA.
74. To the Centre of Nanotechnology, British University, 20 May 2021, Cairo, Egypt.

10-Awards

1- Awards in Egypt

1-State Incentive Award in Physics from the Academic of Science and Technology, Egypt, 2012.

2- Awards in Saudi Arabia

1-Award of (Abdel Hamid Shoman) for Young Arab Researchers for the year 2012 (session 31) (Egyptian nationality), Assistant professor at the University of King Khalid of Saudi Arabia jointly with Dr. Sufian Abdul Rahman Tayeh (Palestinian nationality), assistant professor at the Islamic University of Gaza- the state of Palestine to the abundance of their scientific and contribute to the upgrade of

scientific research and scientific institutions, service, and stimulate scientific cooperation with institutions outside the Arab world.

3- **KKU Distinguished Professor in teaching in March 2017.**

4- **KKU Distinguished Professor in Research in April 2019.**

11-Supervision on M.Sc and Ph.D. students

- 1- Shenouda Shenda Shenouda, **M.Sc 2011**, (Fabrication and characterization of $ZnGa_2Se_4$ thin films), Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt.
- 2- Ahmed Mohammed Abdo El-Rebatty, **M.Sc 2011**, (Study the effect of Ga addition on some physical properties of Se-Te thin films), 2011, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt.
- 3- Abeer Said Farid, **Ph.D. 2011**, (Study the effect of Sb addition on the physical properties of Se-Te thin films), Ph.D., 2012, Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt.
- 4- Mohab Morad Micheal, **M.Sc**, (Study of some transport properties of 2,7-dichlorofluorescein as an organic semiconductor), Physics Department-Faculty of Education-Ain Shams University-Roxy-Cairo-Egypt.
- 5- Nashwa Youseif Abdel-Rahman, **Ph.D.**, (Synthesis and characterization of some nano-materials doped with some transition metals), Physics Department-Faculty of Science (girl section)-Ain Shams University-El-Marghaney-Cairo-Egypt.
- 6- Participating in the experimental section of **M.Sc 2011**, of Dalia Mohamed Abdel Bassett, (Fabrication and Semiconducting Characteristics of Zinc Gallotelluride Thin Films), Physics Department-Faculty of Science (girl section)-Ain Shams University-El-Marghaney-Cairo-Egypt.
- 7- Participating in the experimental section of **M.Sc 2012**, of Sohair EL-Hady Saad, (Preparation and characterization of some chalcogenide semiconductor thin films), Physics Department-Faculty of Science (girl section) - Ain Shams University-El-Marghaney-Cairo-Egypt.
- 8- Participating in the experimental section of Ahmed Abdel-Galil Abdel Aal. **Ph.D. 2012**, (Characterizations of Some Semi-magnetic Chalcopyrite Compounds),

- Physics Department-Faculty of Science (girl section)-Ain Shams University-El-Marghaney-Cairo-Egypt.
- 9- Supervisor (Co-author) of the MSc research proposal of Samia EL-Karany, (M.Sc, 2014), Investigation of the Optical and Electrical Properties of Organic Dye for Solar Energy Conversion Applications, Physics Department-Faculty of Science – King Saud University, Riyadh, Saudi Arabia.
 - 10- Supervisor (Co-author) of the MSc research proposal of Nora El-Dosry, (M.Sc, 2014), Preparation and Optical Characterization of Luminescent Down-shifting Polymer Nanocomposite Thin-films, Physics Department-Faculty of Science – King Saud University, Riyadh, Saudi Arabia.
 - 11- Supervisor as (principal investigator) of the M.Sc research proposal of Faizah Humid, (M.Sc, 2014), (Study of some transport Properties of new organic Semiconductor and its applications), Physics Department-Faculty of Science–King Khalid University, Abha, Saudi Arabia.
 - 12- Supervisor as (principal investigator) of the M.Sc research proposal of Fatem El-Rajhai, (M.Sc, 2014), (Synthesis and Characterization of Bio-magnetic Hydroxyapatite for bone tissue engineering), Physics Department-Faculty of Science–King Khalid University, Abha, Saudi Arabia, November 2018.
 - 13- Supervisor as (Co-author) of the M.Sc research proposal of Amna El-Khaltany, (M.Sc, 2014), (Single crystal growth and characterization of pure and doped L-Alanine and their optoelectronic applications), Physics Department-Faculty of Science–King Khalid University, Abha, Saudi Arabia.
 - 14- Supervisor as (principal investigator) of the M.Sc research proposal of Suda AlAmri (M.Sc, 2016), (Effect of metal doping on the properties of PbI₂ nanostructure: Functionalized semiconductor radiation detector), Physics Department-Faculty of Science–King Khalid University, Abha, Saudi Arabia, November 2018.
 - 15- Supervisor as (principal investigator) of the M.Sc research proposal of Manal Mohammed Alshadidi, (M.Sc, 2018), (Biosynthesis of metal oxides for environmental and biomedical applications), Physics Department-Faculty of Science–King Khalid University, Abha, Saudi Arabia.

12. The reviewer of student research projects and reports in KKU, and KACST

1. External reviewer in King Abdulaziz City for Science and Technology (KACST) in Riyadh, Saudi Arabia projects, 2013-2017.
2. External reviewer for M.Sc report for **Faiza Humid** (Physics Department-KKU), Entitled: Organic Semiconductors: Introduction and Applications, First semester 2013-2014.
3. External reviewer for Student's research article, (Physics Department-KKU), Entitled: Structure, Optical and electrical properties of fluorescence powder and thin films as a new organic semiconductors materials -First semester 2013-2014.
4. External reviewer for Student's research article, (Physics Department-KKU), Entitled: Study of structural, electrical and dielectric properties of fluorescein dye as new organic semiconductor materials-First semester 2013-2014.
5. External reviewer of the MSc research proposal of **Thamraa Saad Aal-Salem**, Nano ZnO Thin Film, Physics Department-Faculty of Science-King Khalid University, Abha, Saudi Arabia.
6. External reviewer of the undergraduate research proposals, the first term (2013-2014), Chemistry Department, Faculty of Science-King Khalid University, Abha, Saudi Arabia.
7. External reviewer of the undergraduate research proposal, entitled (Efficiency of different quantum computational methods to simulate the structure and electronic properties of urea), the second term (2013-2014), Physics Department, Faculty of Science-King Khalid University, Abha, Saudi Arabia.
8. The reviewer of the research project titled: **Theoretical and Experimental investigation of the impact of dust on the efficiency of the solar cell in the Jazan region**, Jazan University, 1-1-2014.
9. The reviewer of the research project titled: **Fabrication of Silicon Nanowires by Electroless Etching Method for Photosensitive Device Application**, Jazan University, 1-1-2014.

10. External reviewer of M.Sc report for **Fatem El-Rajhai** (Physics Department-KKU), Entitled: Bio-magnetic Hydroxyapatite and its applications in bone tissue engineering, First semester 2014-2015.
11. External reviewer of M.Sc report for **Amna El-Khaltany**, (Physics Department-KKU), Entitled: Crystal growth and characterization of Organic Nonlinear Optical Materials, ceramics materials, First semester 2014-2015.
12. External reviewer of M.Sc report for **Mohammed Saeed Alsharai**, (Physics Department-KKU), Entitled: photo-electronic properties of rare-earth-doped solar cell materials, First semester 2014-2015.
13. External reviewer for the undergraduate research proposal entitled (Ground Penetrating Radar (GPR)), First term (2014-2015), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
14. External reviewer for the undergraduate research proposal, entitled (Optical properties of thin films), Second term (2014-2015), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
15. External reviewer for the undergraduate research proposal, entitled (Investigation of growth, structure and optical properties of ADP single crystal), Second term (2014-2015), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
16. External reviewer for the undergraduate research proposal, entitled (Investigation of growth, structure and optical properties of Cobalt-doped ADP single crystal), First term (2015-2016), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
17. External reviewer for the undergraduate research proposal, entitled (Heating value of commercial wood charcoal as a renewable energy resource in Abha, Kingdom of Saudi Arabia), Second term (May 2015-2016), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
18. External reviewer for the undergraduate research proposal, entitled (Determination of Bohr's magneton using normal Zeeman Effect experiment), Second term (May 2015-2016), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.

19. External reviewer for the undergraduate research proposal, entitled (Theoretical modeling and the characterization of ZnS semiconductor), First term (January 2016-2017), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
20. External reviewer in King Abdulaziz City for Science and Technology (KACST) in Riyadh, Saudi Arabia projects, 2013-2018.
21. External reviewer for the Ph.D. thesis entitled: Synthesis and characterization of V₂O₅-TiO₂ Nano-composites metal oxide thin films and their applications in quantum dot sensitized solar cells & gas sensors by Mohamed Aslam Manthrammel, Physics Department, Faculty of Science, King Saud University, Abha, Saudi Arabia.
22. External reviewer for the PhD-Thesis entitled: Synthesis and characterization of V₂O₅-TiO₂ Nanocomposites metal oxide thin films and their applications in quantum dot sensitized solar cells & gas sensors by Mohamed Aslam Manthrammel, Physics Department, Faculty of Science, King Saud University, Abha, Saudi Arabia.
23. External reviewer for the MSc thesis entitled: “Optical properties and durability of Poly (9, 9’-di-n-octylfluorenyl-2.7-diy1)/ ZnO nanohybrid Films: Towards Organic Photovoltaic Applications” by Wadha al-Eneizi, Physics Department, Faculty of Science, King Saud University, Abha, Saudi Arabia.
24. External reviewer of King Khalid University prizes, Faculty of Science, 2017.
25. External reviewer of the MSc-Thesis of Asmhan Saud Ali AL-Shieghi, entitled 'Development of Field Effect Transistor Based on Ferroelectric Poly (vinylidene fluoridetrifluoroethylene),' Physics Department-Faculty of Science–King Abdul-Aziz University, Jeddah, Saudi Arabia, 2017.
26. External reviewer of the MSc-Thesis of Awatif Marzouk Al Marwani, entitled 'Size-dependent Optical Properties of Top-Down GaN Nano LEDs,' Physics Department-Faculty of Science–King Abdul-Aziz University, Jeddah, Saudi Arabia, 2017.
27. External reviewer for the undergraduate research proposal, entitled (Fine structure of atomic energy levels in light and heavy elements in view of spin-orbit coupling),

- Second term, Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia, April 2018.
28. Supervisor for the undergraduate research proposal, entitled (X-ray diffraction in single crystal: Bragg's reflection), Second term (April 2018), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
 29. External reviewer of the MSc- Thesis of Ebtessam Hassan Al-Zhrani, entitled ' Microstructure and Thermal Properties of CdZnTe Quantum Dots', Physics Department-Faculty of Science–King Abdul-Aziz University, Jeddah, Saudi Arabia in April 2018.
 30. External reviewer for the undergraduate research proposal of Yahia Fares Mohamed El-Wadai, entitled (Investigation of the effect of doping on the optical and magneto-optical properties of glass samples synthesized in the Physics Research Lab.), First term, Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia, December 2018.
 31. External reviewer for the undergraduate research proposal of Thoria Al-Shokany, Zohor Assiri, Nadia Al-Khaby, Hagar Al-Ghamdi, entitled (X-rays in theory, and radiotherapy), First term, Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia, December 2018.
 32. External reviewer for the graduate M.Sc research proposal of Wejdan Hamed Salem Al-Yami, entitled (Characterization of photonic glasses), Kingdom of Saudia Arabia), First term (December-2008), Physics Department, Faculty of Science, King Khalid University, Abha, Saudi Arabia.
 33. Supervisor for the undergraduate research proposal (Abdallah El-Hakami), entitled (Synthesis and characterization of pure and doped ZnO nanostructured by low-cost technique), Second term (April 2019), Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
 34. External reviewer for the undergraduate research proposal (Soltan El Wadhai), entitled (Study of gamma attenuation by lead borosilicate glasses), Second term April 2019, Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.

35. External reviewer for for the undergraduate research proposal “Study of some optical properties of recombinant polyvinyl alcohol” under Supervisor's name: Haitham Al-Husseini Ali Muhammad, First term Decemebr 2020, Physics Department, Faculty of Science–King Khalid University, Abha, Saudi Arabia.
36. External reviewer for for the master thesis “Sn INDUCED CHANGES IN THE STRUCTURE AND OPTICAL PROPERTIES OF AMORPHOUS As–Se–Sn THIN FILMS FOR OPTICAL DEVICES” Physics Department, Faculty of Science– Al Jouf University, Sakaka, Saudi Arabia, Second term June 2021.

13- Research Experience

13.1. Preparation, Measurements, and characterization

I am an expert in the preparation, measurements, and characterization of semiconductor materials and devices as follows:

1. Structure properties including (XRD, TGA, DTA and EDX, SEM, and AFM analysis) for amorphous and polycrystalline semiconductors.
2. X-Ray indexing software (Crossfire, Checkcell, and Powder-X).
3. Dc Conductivity at different temperatures, thicknesses, compositions.
4. Ac Conductivity at different temperatures, thicknesses, compositions.
5. Dielectric Properties of different temperatures, thicknesses, compositions.
6. Switching phenomena (memory diode, memory switch, *IV* analysis) for optical recording media).
7. Optical properties (Transmission, Reflection, bandgap, energy dispersive parameters, complex dielectric constant, relaxation time, dissipation factor, and optical conductivity).
8. Galvanomagnetic properties, including Hall Effect, magneto-resistance, and ac magnetic susceptibility.
9. Current-voltage transport properties in semiconductors, (High-field conduction, space charge limited current, Poole-Frenkel, and Schottky mechanisms).

10. Characterization and analysis of Schottky Diode, p-n heterojunction diode, Metal-semiconductor-metal, Metal-insulator-semiconductor junctions, photovoltaics, solar cells, and a photodiode.
11. Effect of illumination and photoconduction mechanisms of organic and inorganic semiconductor devices.
12. Dye-sensitized solar cells (DSSCs)
13. Photovoltaic properties of II-VI using MBE technology.
14. Preparation of nanomaterials using sol-gel spin coating technique (thin-film production).
15. Preparation of nanomaterials using co-precipitation method (powder production).
16. Preparation of nanomaterials using the hydrothermal method (powder production).
17. Preparation of nanomaterials using Microwave technology method (powder production).
18. Preparation of nanomaterials using the hydrothermal method (Thin-film production).
19. Carbon nitride materials and its doping.
20. Graphene, reduced Graphene oxide, and Graphene oxide and its applications in nanocomposites, solar cells, and batteries.
21. Bio-Ceramics (Pure and doped Hydroxyapatite) for bone cement applications (current trend).
22. Calculations of nonlinear optics.
23. UV sensors are based on nanomaterials and polymers composites.
24. Solar concentrator based on polymer materials.
25. Polymer nanocomposite.
26. Microwave technology for synthesis of nano-materials.
27. Graphene oxide: synthesis and applications (polymer and composites).
28. Wastewater treatments,
29. Photocatalytic materials using Microbial activity (current trend).
30. Carbon quantum dots (current trend).
31. Graphene-based nanocomposites: Synthesis and applications (current trend).
32. Optical limiting technique/materials for flexibile laser filters (current trend).

33. Nonlinear media/materials/setup (current trend).

13.2. Building new laboratories (Egypt& Saudi Arabia).

1. Nano-Science laboratory, and now titled as (Nanoscience Lab for Environmental and Bio-medical Applications (NLEBA), Physics Department – Faculty of Education – Ain Shams University – Roxy – Cairo –Egypt.
2. Central Characterization Lab., Physics Department – Faculty of Education – Ain Shams University – Roxy – Cairo –Egypt.
3. Advanced Functional materials & optoelectronics Laboratory, Physics Department – Faculty of Science – King Khalid University – Abha – Saudi Arabia.
4. Nano-Science and organic thin-film laboratory, Physics Department – Faculty of Science Girl Graduate Centre (El-3san) – King Khalid University – Abha – Saudi Arabia.
5. Participating in building Nano-Science laboratory, Physics Department – Faculty of Science – (Girl Section) - King Saud University – Riyadh – Saudi Arabia.
6. Building Nano-Science laboratory, Physics Department – Faculty of Science – (Girl Section) - Princess Nora Bint Abdul Rahman University, Faculty of Science, Physics Department, Saudi Arabia.
7. Building Wet Chemical Laboratory, Center of Nanotechnology, King Abdulaziz University (KKU), Jeddah, KSA.
8. Laboratory of Advanced Bio-Medical Technologies (LABMT), Radiation Department– Faculty of Medical Science – King Khalid University – Abha – Saudi Arabia.

13.3. Up to date personal keywords

1. Organic/inorganic semiconductors
2. Nano-materials, nano-composites, metal oxides, nano-metal chalcogenides, nano-metal halides, radiation detector materials, nano-bioceramics.
3. Graphene oxide: synthesis and characterization, and their applications.
4. Graphene: synthesis and characterization, and their applications.
5. Thin film technology: low-cost deposition systems.
6. Polymer optical materials, polymer nanocomposites, CUT-OFF laser filters.

7. Carbon quantum dots (current trend).
8. Photocatalytic materials using Microbial activity (current trend).
9. Bio-Ceramics (Pure and doped Hydroxyapatite) for bone cement applications (current trend).
10. Low-cost method for large production of graphene nanosheets (current trend).
11. Nonlinear media (current trend).
12. Silver nanoparticles and silver nanocomposites (current trend).

14-Important information about my publication list (up to 15 May 2019)

1. Scopus ID: 14421963500, Scopus link (<https://www.scopus.com/authid/detail.uri?authorId=14421963500>).
2. Orcid No.: <https://orcid.org/0000-0002-1299-8758>
3. Research gate link (https://www.researchgate.net/profile/IS_Yahia)
4. Google Scholar link (https://scholar.google.com/citations?hl=en&user=xMyu-0sAAAAJ&view_op=list_works&sortby=pubdate)
5. Total No. of publications in national/international/conference journals = 462 from Google Scholar Analysis.
6. I am a research ranked No. 3 at Ain Shams University as total publications, August 2021 = 422 from scoups database.
7. I am a research ranked No. 1 at King Khalid University as total publications = 422 with King Khalid University affiliation from scoups database.
8. I am a research ranked in (Nano + Egypt) No.= 1, August 2021 with total publication in nanoscale materials = 244 according to Scopus Database.
9. I am a research ranked in (Nano + Saudi Arabia) No.= 8, August 2021, with total publication in nanoscale materials = 266 according to Scopus Database.
10. I am a research ranked in (Materials + Egypt) No.= 1, August 2021, with total publication in nanoscale materials = 358 according to Scopus Database.
11. I am a research ranked in Ain Shams University, No.= 1, August 2021, through the (SciVal) website during the years from 2016-2020, with publications = 197 during this period according to Scopus Database.

12. (Scopus *h*-index = 37), Scopus Total Publications No.= 422, Scopus total No. of citations = 5530, cited by 3521 documents, 477 co-authors.
13. (*h*-index = 39 Google Scholar), Google Scholar total No. of citations= 6262, Google Scholar Total Publications No.= 462, Google Scholar i_{10} -index = 185.
14. Research Gate (RG) index = 47.51, *h*-index = 36, *h*-index excluding self-citations = 32, total citations = 5592, Research Gate Total Publications No.= 450, Reads = 61866, research article interest = 4425, My score is higher than 97.5 % of Research Gate members, 38497 read articles.
15. External reviewer in more than 110 peer reviewed and ISI journals
- 16.** Collaboration with more than 100 universities and institute all over the world (Scopus analysis).
17. Participate in 110 conferences, workshops, and training.