

CURRICULUM VITAE

PERSONAL DATA

Name	Mohamed Abdel Rafea Ibraheem Konsow
Nationality	Egypt
Position	Professor
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EDUCATION

Year	Academic Degree	Institution
1990	B.Sc. in Physics	Faculty of Science, Department of Physics, Helwan University
1996	M.Sc	Physics Department Cairo University, Faculty of Science
2004	Ph.D	Physics Department Cairo University, Faculty of Science

WORK EXPERIENCE

Period	Position	Address
1991 - 1996	Assistant Researcher	National Research Center, Physics Deviation, solid state physics Department, Dokki, cairo Egypt
1996-2004	Researcher Assistant	
2004-2005	Assistant professor	National Research Center, Physics Deviation, solid state physics Department, Dokki, cairo Egypt
2005-2010	Assistant professor	Advanced Technology and New Materials Research institute, the City for science & Technology, New Borg El Arab, Alexandria, Egpt

2010-2012	Associate Professor	of the Electronic Materials Dep., Advanced Technology and New Materials Research institute, the City for science & Technology (25/3/2010-8/2012) and
2012--2014	Associate Professor	Al Imam Mohammed Ibn Saud Islamic University, college of Science, Department of Physics Riyadh, KSA
2017-now	Professor	Department of physics, Al Imam Mohammed Ibn Saud Islamic University, college of Science.

RESEARCH INTERESTS

Thin film and coatings deposition by different techniques, optical, electrical and photoelectrical properties of semiconducting thin solid films, applications in detectors

PUBLICATIONS

- 1- Galvanomagnetic Properties of $Pb_{1-x}Sn_xTe$ Polycrystalline Pressed Samples, F. S. Terra, **M. Abdel Rafea**, M. Monir, J. Renewable Energy 24(2001)569-574.
- 2- Phoconductivity and electrical properties of $Pb_{1-x}Sn_xTe$ thin films, F. S. Terra, **M. Abdel Rafea** and M. Mounir, Journal of Material Science: Material in Electronics Vol. 12 (2001) 561-567.
- 3-Preparation and characterization of ZnSe nanoparticles by Mechanochemical process, **M. Abdel Rafea**, Journal of Materials Science: Materials in Electronics, Vol. 18 pp 415–420. (2007)
- 4- Preparation and Optical Properties of SeS Thin Films Semiconducting Chalcogenide Glasses, **M. Abdel Rafea** and A. A. M. Farag, Chalcogenide Letters Vol. 5, No. 3, March 2008, p. 27 – 33.
- 5- Effect of crystallization on the optical properties of $Se_{0.8}S_{0.2}$ amorphous films, **M. Abdel Rafea** and Huda Farid, J. optoelectronics and Advanced Materials. Vol. 10, No. 8, August 2008, p. 2129 – 2133.
- 6- Preparation and characterization of $CuInSe_2$ - $CuAlSe_2$, $CuInS_2$ and ZnS nanopowder by mechanical alloying technique, **M. Abdel Rafea**, N. Roushdy, Chalcogenide Letters Vol. 5, No. 10, Oct. 2008, p 219-227.

- 7-Determination of the Optical band gap for amorphous and nanocrystalline copper oxide thin films prepared by SILAR technique, **M. Abdel Rafea** and N. Roushdy, j. Physics D: Applied physics, 42 (2009) 015413 6pages.
- 8- Phase change and optical band gap behavior of $\text{Se}_{0.8}\text{S}_{0.2}$ chalcogenide glass films, **M. Abdel Rafea** and Huda Farid, J. Materials Chemistry and Physics, Vol. 113 (2009) pp868-872.
- 9-Crystallization kinetics of the TeO_2 -BaO glass system, E.R. Shaaban, Y.B. Saddeek and **M. Abdel Rafea** , Philosophical Magazine Vol. 89, No. 1 (2009), pp 27-39.
- 10-Effect of substrate temperature on the galvanomagnetic, photoelectrical and optical properties of $\text{Pb}_{0.8}\text{Sn}_{0.2}\text{Te}$ thin films, **M. Abdel Rafea**, F. S. Terra, M. Mounir, R. Labusch Chalcogenide Letters Vol. 6, No. 3, March 2009, p. 115 – 123.
- 11- Structural and Optical Characterization of Dip coated PbS Nano Structured Films prepared at Different Reaction Temperature, **M. Abdel Rafea** and N. Roushdy, J. Optoelectronics and advanced materials, Vol. 11, No. 7, May (2009) p. 929 – 934.
- 12- Effect of substrate type and optimization of the preparation condition for PbSnTe films used as IR photoconductors, **M. Abdel Rafea**, R. Labusch, F.S.Terra, M.Mounir, journal of optoelectronics and advanced materials-RC, Vol 3 issue 6 (2009), PP 543-552.
- 13-Optical, electrical and photovoltaic characteristics of organic semiconductor based on Oxazine/n-Si heterojunction, A.A.M.Farag, E.A.A.El - Shazly, **M. Abdel Rafea**, A.Ibrahim, Solar energy materials and solar cells, 93 (2009)1853-1859.
- 14-Structural and Optical Characteristics of Nano-sized structure of ZnCdS thin films prepared by dip-coating method, **M. Abdel Rafea**, A.A.M.Farag and N. Roushdy, J. Alloys and Compounds. Vol. 485 (2009) p 660-666
- 15-Nano-Sized Co(II)-8-hydroxyquinolate Complex Thin Film via Surface Layer-by-Layer Chemical Deposition Method: Optimized Factors and Optical Properties, Mohamed E. Mahmoud, Sawsan S. Haggag, **M. Abdel Rafea** and Tarek M. Abdel-Fattah, polyhedron, Polyhedron 28 (2009) 3407-3414.
- 16-Study of optical properties of nanostructured PbS films, **M. Abdel Rafea** and N. Roushdy, Philosophical magazine letters, Vo. 90, Issue 2 (2010) 113 – 120.
- 17-Optical dispersion and electronic transition characterizations of spin coated polyaniline thin films, A.A.M. Farag, A. Ashery, **M. Abdel Rafea**, Synthetic Metals, Vol. 160 issue 1-2(2010) 156-161.
- 18-Characterization of Nano/Micro Size Copper Powder By Product of Electropolishing Process, A.M. Awad, Aref M. E. Abd-El – Rahman and **M. Abdel Rafea**, Journal of American Science Vol. 6 No. 9 (2010) 137-142.

- 19-Synthesis, Characterization and Optical-Electrical Properties of Thin Film Deposited Nano-Co(II)-8-Hydroxy-5-nitrosoquinolate complex via Layer-by-Layer Chemical Deposition Technique, Sawsan M.S. Haggag, Eiman I. Fathallah, Mohamed E. Mahmoud, **M. Abdel Rafea**, Alaa A.M. Farag, polyhedron, Volume 30, Issue 11 (2011) pp 1752-1759.
- 20-Characterization of electrical and optical absorption of organic based methyl orange for photovoltaic application, A.A.M. Farag, A.M.Mansour, A.H.Ammar, **M. Abdel Rafea**, Synthetic Metals, Volume 161, Issues 19-20, October (2011), Pages 2135-2143.
- 21- Electrical conductivity, dielectric properties and optical absorption of organic based nanocrystalline sodium copper chlorophyll for photodiode application, A.A.M. Farag, A.M.Mansour, A.H.Ammar, **M. Abdel Rafea afea**, A.M.Farid, J. Alloys and Compounds 513 (2012) 404– 413
- 22-Optical and Photoconductive Properties of Pb_{0.9}Sn_{0.1}Se Nano-structured Thin Films Deposited by Thermal Vacuum Evaporation and Pulsed Laser Deposition, Sara Gad, **M. Abdel Rafea** and Yehia Badr, J. Alloys and Compounds Vol 515 (2012) 101-107.
- 23- Controlling the crystallite size and influence of the film thickness of nanocrystalline Cu₂S films on the optical and electrical characteristics for photovoltaic applications, **M. Abdel Rafea**, A.A.M. Farag, N. Roushdy, Materials Research Bulletin 47 (2012) 257–266
- 24-Device characterization of organic nanostructure based on sodium copper chlorophyllin (SCC), M.E. Aydin, A.A.M.Farag, **M. Abdel Rafea**, A.H.Ammar, F. Yakuphanoglu, Synthetic Metals 161 (2012) 2700– 2707
- 25- Electrical and Interface characteristics of nanocrystalline n-Zn_{0.5}Cd_{0.5}S /p-Cu₂S heterojunction structure prepared by dip coating, A.A.M. Farag, **M. Abdel Rafea**, N. Roushdy, Sara Gad, super lattices and microstructure Superlattices and Microstructures 52 (2012) 288–298
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- 27- Heterojunction performance of dip coated n-Cd_{0.5}Zn_{0.5}S thin films on different metal sulfide substrates, Materials Science in Semiconductor Processing, **M. Abdel Rafea**, A.A. M. Farag, Sara Gad, N. Roushdy Vol. 16, Issue 1 (2013) 89-98
- 28- Successive ion layer adsorption and reaction (SILAR) technique synthesis of Al(III)-8-hydroxy-5-nitrosoquinolate nano-sized thin films: Characterization and factors optimization, Sawsan M.S. Haggag, A.A.M. Farag, **M. Abdel Rafea**, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy Vol. 102 (2013) 150–158

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- 37- Light scattering and photosensitivity characteristics of nanocrystalline $Zn_{1-x}Cd_xS$ ($0 \leq x \leq 0.9$) films for photosensor diode application, O. El-Shazly, A.A.M. Farag, **M. Abdel Rafea**, N. Roushdy, E.F. El-Wahidy, Sensors and Actuators A: Physical 239 (2016) 220–227.
- 38- Influence of ZnO nanoparticles on the performance of LED based on oligomer thin films. N. Mustapha, **M. Abdel Rafea**, O. Aldaghri1, Boutheina Ben Abdelaziz, and K. H. Ibnaouf, J. Materials Science: Materials in Electronics, **Vol 32** (2021) 5473–5481

- 39-Deep Insights into the Radiation Shielding Features of Heavy Minerals in Their Native Status: Implications for Their Physical, Mineralogical, Geochemical, and Morphological Properties, Mostafa A. Masoud, Ahmed M. El-Khayatt, Mohammad W. Marashdeh, Mohamed G. Shahien, Bottros R. Bakhit 3, Wael Abdelwahab 4, **M. Abdel Rafea** and Ahmed M. Zayed, *Sustainability* 2022, 14(23), 16225; <https://doi.org/10.3390/su142316225>
- 40- Development and evaluation of cost-effective and green Bi-functional nickel oxide decorated graphene electrocatalysts for alkaline fuel cells, Marwa H. Gouda Noha A. Elessawy, **M. Abdel Rafea**, N. Roushdy, M. Elsayed Youssef. *Results in Engineering*, Vol. 17 (2023) 100871.
- 41- The effect of annealing on the structure, morphology, and optical properties of Co_3O_4 thin films prepared using a modified dip coating technique, **M. Abdel Rafea**, A. Eid, Nazir Mustapha, *Materials Science and Engineering B* 290 (2023) 116294
- 42- Synthesis and Characterization of Carbon Nanotube/Copper Oxide nanocomposite as an Enhanced Absorber for Solar Radiation, **M. Abdel Rafea**, A. Eid, Walid M. Daoush, *Optical Materials* 138 (2023) 113643