Ali Samir Awed

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Education

2015 - 2018 **Physics Department, Faculty of Science, Damietta University, New Damietta, Egypt**
Ph.D. in Experimental Physics and Material Science

2013 – 2015 **Physics Department, Faculty of Science, Mansoura University, Mansoura, Egypt**
M.Sc. in Experimental Physics and Material Science

2012 – 2013 **Physics Department, Faculty of Science, Mansoura University, Mansoura, Egypt**
Diploma in Experimental Physics

2007 – 2011 **Physics Department, Faculty of Science, Mansoura University, Mansoura, Egypt**
B.Sc. in Physics

1998 – 2002 **Physics and Chemistry Department, Faculty of Education, Mansoura University, Mansoura, Egypt**
B.Sc. in science and education.

Work Experience

Present **Center Photonics and Smart Materials (CPSM), Zewail City of Science and Technology, October Gardens, 6th of October City, Giza, Egypt**
Research Assistant,

Research Experience

2013 – 2015 **Solar cell lab, Faculty of Science and Faculty of Engineering, Mansoura University, Mansoura, Egypt**
Master's Student

- Enhancement of photovoltaic power system using field programmable gate arrays (FPGA).
- Designing and improvement of Sun Tracking Systems Controlled by FPGA.

2015 - 2018 **Thin films lab, Faculty of Science, Damietta University, New Damietta, Egypt**
Ph.D Student

- Characterization of organic and inorganic materials
- Studying the structural, optical and electrical properties of organic and inorganic materials.
- Designing a hetero-junction solar cell.

List of Publications

1. A. El-ghandour, **A. S. Awed**, M. Abo-El khier, K. Abdeen, Correlation between induced changes in the structural properties of nanostructured boron subphthalocyanine chloride thin films and their linear and nonlinear optical properties, Optics & Laser Technology,volume 112, 15 April 2019, Pages 126-133
2. A. El-Ghandour, **A.S.Awed**, M.I.A. Abdel Maksoud, M.A. Nasher, 1,2 Dihydroxyanthraquinone: synthesis, and induced changes in the structural and optical properties of the nanostructured thin films due to γ-irradiation, Spectrochimica Acta Part A, 206 (2019) 466 - 473 doi:10.1016/j.saa.2018.08.045.
3. A. El-ghandour, MFO Hameed, **A.S.Awed**, SSA Obayya, Optical and electrical properties of nanostructured N,N′-diphenyl-N,N′-di-p-tolylbenzene-1,4-diamine organic thin films, Applied Physics **A** 124 (8), 543 (2018).
4. M.M.El-Nahass, H.M.Zeyada, N.A.El-Ghamaz, **A.S.Awed,** Structural investigation, thermal analysis and AC conduction mechanism of thermally evaporated alizarin red S thin films, Optik,volume 170, october 2018, Pages 304-313.
5. **A.S.Awed**, N.A. El-Ghamaz ,M.M. El-Nahass,H.M. Zeyada, Linear and nonlinear optical properties of alizarin red S thin films, Indian Journal of Physics, Springer (2019).
6. **A. S. Awed,** M. I. A. Abdel Maksoud, M. M. Atta, Ramy Amer Fahimm Nonlinear optical properties of irradiated 1,2-dihydroxyanthraquinone thin films: merged experimental and TD-DFT insights.J Mater Sci: Mater Electron (2019).
7. HI Abdelkader, M Saber, **A.S. Awed** , Efficiency Improvement of Sun Tracking Systems Controlled by FPGA, International Journal of Scientific & Engineering Research, Volume 5, Issue 9, September-2014 ISSN 2229-5518.
8. M. I. A. Abdel Maksoud,Ahmed El-ghandour,GhariebS. El-Sayyad,**A. S. Awed**, A. H. Ashour, Ahmed I. El-Batal,Mohamed Gobara, E. K. Abdel-Khalek,M. M. El-Okr.Incorporation of Mn^{2+} into cobalt ferrite via sol–gel method: insights on induced changes in the structural, thermal, dielectric, and magnetic properties. J Sol-Gel Sci Technol (2019).
9. MIA Abdel Maksoud, Ahmed El-ghandour, Gharieb S El-Sayyad, **AS Awed**, Ramy Amer Fahim, MM Atta, AH Ashour, Ahmed I El-Batal, Mohamed Gobara, EK Abdel-Khalek, MM El-Okr, Tunable structures of copper substituted cobalt nanoferrites with prospective electrical and magnetic applications. Journal of Materials Science: Materials in Electronics(2019).

Experimental Experience and Research Tools

Thin films preparation:

- Thermal Evaporation.
- Spin Coating.
- RF Sputtering.

Characterization tools:

- Fourier-transform infrared spectroscopy (FTIR)
- Energy Dispersive X-ray (EDX)
- Differential Scanning Calorimetry (DSC)
- X-ray diffraction (XRD)
- Atomic Force Microscopy (AFM)
- Transmission Electron Microscopy (TEM)
- UV-Vis.-IR spectroscopy
- Fluorescence spectrophotometer
- Programmable Automatic RCL Meter

Skills:

Technical Skills

- EC-Lab®
- Origin Lab
- Fullprof suite
- LaTeX
- MATLAB
- DFT - Gaussian

Academic references:

Prof. Mohamed Farhat Hameed
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