LIST OF PUBLICATIONS

Title of M.Sc. Thesis:
The role of the complex ions on the mechanical of the phase transitions in some ionic crystals by dielectric and thermodynamical analysis, Physics Department, Faculty of Science, Cairo University, Egypt (1980).

Title of Ph.D. Thesis:
Radiation effects on ceramics and glasses in the system alkali-aluminium and boron oxides for the application in radiation dosimetry, Physics Department, Faculty of Science, Cairo University, Egypt (1987).

Published Papers in the Field of Biomaterials:

A. Biopolymers:


[25] Photovoltaic performance analysis of organic device based on PTCDA/n-Si heterojunction,
A.A.M. Farag, W.G. Osiris and I.S. Yahia,

[26] Extraction of the device parameters of Al/P₃OT/ITO organic Schottky diode using J-V and C-V characteristics,
W.G. Osiris, A.A.M. Farag and I.S. Yahia,

[27] Thermal and structural studies of poly(vinyl alcohol) and hydroxypropyl cellulose blends,
Osiris W. Guirguis and Manal T. H. Moselhey,

[28] Optical studies of fast neutron irradiated composites of poly(vinyl alcohol) and bovine serum albumin,
Nabawia A. Abdel Zaher and Osiris W. Guirguis,
Materials Science (An Indian Journal) (MSAIJ), 8, No. 9, 370-382 (2012).

[29] Enhancement of photovoltaic characteristics of nanocrystalline 2, 3 naphthalocyanine thin film-based organic devices,
A.A.M. Farag, W.G. Osiris and A.H. Ammar,

[30] Physical study of poly(methyl methacrylate)/rare earth composite luminescent materials,
Osiris W. Guirguis, Wedad A. Alharbi and Jamila H. Alzahrani,

[31] Macrostructure and optical study of PMMA/TiO₂ nanoparticles composites,
Osiris W. Guirguis, Mohamed S. Melegy and Nabawia A. El- Zaher

[32] Optical properties of poly(vinyl alcohol)/hydroxypropyl cellulose blends,
Osiris W. Guirguis and Manal T. H. Moselhey,
Materials Science (An Indian Journal), 9, No. 1, 8-23 (2013).

[33] Enhancing antimicrobial activity for chitosan by adding Jojoba liquid wax,
Osiris W. Guirguis, Mahmoud F. Hamed and Andrew A. Nasrat,

[34] Optical studies of fast neutron irradiated poly(vinyl alcohol)/hydroxypropyl cellulose blends,
M.M. Abutalib, Osiris W. Guirguis and Nabawia A. Abdel Zaher,

[35] Electrical and photosensing performance of heterojunction device based on organic thin film structure,


[55] Structural, thermal and optical modifications of chitosan due to UV-ozone irradiation, 
Nabawia A. Abdel-Zaher, Gehan T. El-Bassyouni, Manal T.H. Moselhey and **Osiris W. Guirguis**, 

[56] Enhancing the stability, hydrophilicity, mechanical and biological properties of electrospun polycaprolactone in formic acid/acetic acid solvent system, 
Basma Ekram, Bothaina M. Abdel-Hady, Abeer Y. El-kady, Sherif M. Amr, 
Hala Gabr, Ahmed I. Waley and **Osiris W. Guirguis**, 

[57] Macrostructure and optical studies of hydroxypropylcellulose in pure and nano- 
composites forms, 
Najlaa D. Alharbi and **Osiris W. Guirguis**, 
Results in Physics, 15, 102637 (2019).

[58] Biological applications of nanocomposites based on Based on chitosan-TiO$_2$ 
nanoparticles polymeric films reinforced with oleic acids, 
Magda S. Hanafy, Waled El Dosoke, Elham Mohamed, Nahla H. El-Shaer, 
Mohamed Goma, Amira A. Gamal, Mona A. Esawy and **Osiris W. Guirguis**, 

[59] Optical characterizations and dielectric performance of 5,10,15,20- 
Tetrakis(pentafluorophenyl)-21H,23H-porphine palladium(II) for photodetector 
applications, 
A.A.M. Farag, G.F. Salem, E.A.A. El-Shazly and **Osiris W. Guirguis**, 
Submitted to Journal of Non-Crystalline Solids (12 December, 2019).

[60] On the optical characterization and biological implications of titania phases, 
Ghareib W. Ali, **Osiris W. Guirguis**, Mohamed M. Gobara, Sherif F. M. 
Mustafa, Nabawia A. El-Zaher and Wafa I. Abdel-Fatah, 

[61] Effect of TiO$_2$ nanoparticles on the structural configurations, thermal, 
mechanical and optical properties of CS/TiO$_2$(NPs) composites, 
Elham M. Hussein, Waled M. Desoky, Magda F. Hanafy and **Osiris W. Guirguis**, 
Submitted to Journal of Materials Research and Technology (8 February, 2020).
B. Bioceramics:

Book Editor(s): GOODHEW, PJ; DICKINSON, HG  
Conference: 9TH EUROPEAN CONGRESS ON ELECTRON MICROSCOPY  
Location: YORK, ENGLAND Date: SEP 04-09, 1988


Conference: 1st Radiation Physics Conference Location: ASSIUT UNIV, QENA CAMPUS, QUENA, EGYPT Date: NOV 15-19, 1992


[9] Translucency - crystallite size – thermal expansion relations in zircon opacified glazes, S. El-Defrawi, Wafa I. Abdel-Fattah, S. Darwish and W.G. Osiris,


C. Bioglasses:

[1] Alkali-alumino-borate glass for fast neutron low level dosimetry,
M.A. Fadel, A.A. El-Sayed, A.M. Nassar and W.G. Osiris,
Proceeding of the First Egyptian-British Conference on Biophysics, Cairo
University, Egypt, 26-28 October (1987), pp. 185-193.

[2] Induced effect of fast neutrons on some physical properties of alkali-alumino-
borate glass,
M.A. Fadel, S.K. Youssef, A.A. Salama, A.M. Hashad and W.G. Osiris,
Radiation Effects Express, 2, 1-7 (1988).

[3] Effect of fission neutrons on refractive index, density and hardness of lithium-
borosilicate glass,
A.M. Hashad, A.A. Salama, S.K. Youssef and W.G. Osiris,

[4] Elastic properties and structural studies on some zinc-borate glasses derived
from ultrasonic, FT-IR and X-ray techniques,
M.S. Gaafar, N.S. Abd El-Aal, O.W. Gerges and G. El-Amir

[5] A.C. conductivity and relaxation dynamics in zinc–borate glasses,
Ghada E. El-Falaky, Osiris W. Guirguis and Nadia S. Abd El-Aal

[6] Effect of zinc on the physical properties of borate glasses,
Ghada E. El-Falaky and Osiris W. Guirguis

**Published Papers in the Field of Biophysics:**

[1] Effects of 200 kHz electromagnetic fields in the environment of hemoglobin,
E.M. El-Mashak, W.G. Osiris and E.A. El-Bendary,
Proceeding of the Regional Symposium on Environmental Studies (UNARC),

[2] Changes in the optical properties of row cotton produced by fast neutron and
γ-irradiation of the seeds,
F.M. Tera, K.E. Shady, H. Higazy and W.G. Osiris,
Proceeding of the Third Conference on Optical Spectroscopy, Laser and
their Applications, National Research Centre, Cairo, Egypt, 15-18 October
(1990), pp. 171-175.

[3] Changes of some physical properties of row cotton produced by gamma- and
fast neutron-irradiated seeds,
W.G. Osiris, F.A. Moktader, K.E. Shady, S. Hammad, M.A.H. Shokry and F.M. Tera,

[4] In vitro study on the effect of low level fast neutrons on cow hemoglobin, S.A. Gaafar and W.G. Osiris,
Egyptian Journal of Medical Engineering, 9, 73-83 (1993).

[5] CO\textsubscript{2} laser effects on the structure of gall bladder stones, W.G. Osiris,

[6] Induced changes on ionic contents, macrostructure as well as on the external surface of eggs on \textit{Schistocerca gregaria} due to exposure to CO\textsubscript{2} gas laser beam, A. Abd El-Meguid and W.G. Osiris,


[9] Structural changes of cotton seeds due to fast neutrons irradiation, W.G. Osiris,


[21] Experimental study on antimicrobial activity of silk fabric treated with natural dye extract from neem (Azadirachta indica) leaves, Abeer A. Abd El Aty, Gehan T. El-Bassyouni, Nabawia A. Abdel-Zaher and Osiris W. Guirguis,
Fibers and Polymers, 19, No. 9, 1880-1886 (2018).

[23] Eco-dyeing of wool fabrics with natural dye extracted from leaves of neem, Nabawia A. El-Zaher, Manal T.H. Moselhe and Osiris W. Guirguis

[24] Amendments of the structural and physical properties of cotton fabrics dyed with natural dye and treated with different mordants, Nabawia A. Abdel-Zaher, Gehan T. El-Bassyouni, Mona A. Esawy and Osiris W. Guirguis,
https://doi.org/10.1080/15440478.2019.1689884

[25] The role of regional optimization in esophageal cancer by using intensity modulated radiation therapy,
Samah K. Elshamndy, Hassan S.A. Abou Elenein, Amin E. Amin, M.S. Ali and Osiris W. Guirguis,
Under publication

Interaction of low frequency electromagnetic fields with biological matter,
W.G. Osiris,
Review Article, Submitted to the Scientific Committee for Promotion for Professor Degree in Physics (2000).