

CURRICULUM VITAE

PERSONAL DATA

Name	Ahmed Mahmoud El-khayatt
Nationality	Egyptian
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EDUCATION

Year	Academic Degree	Institution
1991	B.Sc. in physics	El- Zagazig University, Egypt.
1999	M.Sc. in Experimental Nuclear Physics	Faculty of Science, El-Mansoura University, Egypt.
2006	Ph.D. in Experimental Nuclear Physics	Faculty of Science, El-Mansoura University, Egypt.

WORK EXPERIENCE

Period	Position	Address
November, 2012 – present	Prof. Dr. of Physics	Al Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh, Saudi Arabia.
October, 2008- Jun, 2012.	A scientific consultant	The X-project established for the Saudi Customs
November, 1998- present	Associate Prof.	Reactor Physics Department, Nuclear Research Centre, Atomic Energy Authority, 13759, Cairo, Egypt
2007-2008.	Lecturer	Suez Canal University, Faculty of science, Ismailia.
November, 1999- October, 2001	Lecturer	Faculty of Engineering, Menoufia University.

October, 2001-Jun, 2002.	Lecturer	Sabha University, Libya.
October, 1992- November, 1999.	Lecturer	Faculty of Science Al-Mansoura University, Egypt.

RESEARCH INTERESTS

Radiation Physics , Nuclear Physics, Computational Physics, Material Sciences

PUBLICATIONS

1. Masoud, M.A., **El-Khayatt A.M.**, Shahien, M.G., Bakhit, B.R.;Suliman, I.I., Zayed, A.M. Radiation Attenuation Assessment of Serpentinite Rocks from a Geological Perspective”. *Toxics* **2022**, *10*(11), 697; <https://doi.org/10.3390/toxics10110697>
2. Mostafa A. Masoud, **Ahmed M. El-Khayatt**, Mohammad W. Marashdeh, Mohamed G. Shahien,Bottros R. Bakhit, Wael Abdelwahab, Mohamed Abdel Rafea, Ahmed M. Zayed “Deep Insights into the Radiation Shielding Features of Heavy Minerals in Their Native Status: Implications for Their Physical Mineralogical, Geochemical, and Morphological Properties".*Sustainability* **2022**, *14*(23), 16225; <https://doi.org/10.3390/su142316225>
3. Ahmed M. El-Khayatt, H.A. Saudi, Recycling of waste porcelain into newly developed bismo-borate glass admixture with Gd³⁺ ions for nuclear radiation protection uses: An experimental and theoretical study, **Radiat. Phys. Chem.**, **2022**(203), 110612, doi.org/10.1016/j.radphyschem.2022.110612.
4. Pawel Sikora, Mateusz Techman, Karol Federowicz, Ahmed M. El-Khayatt, H.A. Saudi, Mohamed Abd Elrahman, Marcin Hoffmann, Dietmar Stephan, Sang-Yeop Chung, Insight into the microstructural and durability characteristics of 3D printed concrete: Cast versus printed specimens, *Case Studies in Construction Materials*, (17), 2022, e01320,doi.org/10.1016/j.cscm.2022.e01320.
5. Hussein RK, Khouqeer G, Alkaoud **A. M., El-Khayatt**. Probing the Action of Screened Anticancer Triazole–Tetrazole Derivatives Against COVID-19 Using Molecular Docking and DFT Investigations. *Natural Product Communications*. **2022**;17(5). doi:[10.1177/1934578X221093915](https://doi.org/10.1177/1934578X221093915)
6. Elbashir, F.E.M.; Ksouri, W.; Habbani, F.; **El-Khayatt, A.M.**; Eisa, M.H.; Suliman, I.I. Analysis of Uncertainties in Clinical High-Energy Photon Beam Calibrations

- Using Absorbed Dose Standards. *Appl. Sci.* **2022**, *12*, 3857.
<https://doi.org/10.3390/app12083857>
7. Pawel Sikora, Mateusz Techman, Karol Federowicz, **Ahmed M. El-Khayatt**, H.A. Saudi, Mohamed Abd Elrahman, Marcin Hoffmann, Dietmar Stephan, Sang-Yeop Chung, Insight into the microstructural and durability characteristics of 3D printed concrete: Cast versus printed specimens, **Case Stud. Constr. Mater.**, **2022**(17), e01320, ISSN 2214-5095 ,<https://doi.org/10.1016/j.cscm.2022.e01320>.
 8. Pawel Sikora, A. M. El-Khayatt, H.A. Saudi, Sang-Yeop Chung, Dietmar Stephan, Mohamed Abd Elrahman, Evaluation of the effects of bismuth oxide (Bi_2O_3) micro and nanoparticles on the mechanical, microstructural and γ -ray/neutron shielding properties of Portland cement pastes, **Constr Build Mater**, *284*, 2021, 122758, doi.org/10.1016/j.conbuildmat.2021.122758.
 9. Al-Rajhi, M., Idriss, H., Alaamer, A. S., & El-Khayatt, A. (2021). Gamma / neutron radiation shielding, structural and physical characteristics of iron slag nanopowder. *Appl. Radiat. Isot.*, *170*, 109606. doi:10.1016/j.apradiso.2021.109606
 10. A.M. Zayed, M.A. Masoud, M.G. Shahien, H.S. Gökçe, K. Sakr, W.A. Kansouh, A.M. El-Khayatt, Physical, mechanical, and radiation attenuation properties of serpentine concrete containing boric acid, **Constr Build Mater**, **2020**, 121641, doi.org/10.1016/j.conbuildmat.2020.121641.
 11. Zayed, A., Masoud, M., Rashad, A. M., El-Khayatt, A., Sakr, K., Kansouh, W., Shahien, M. **(2020)**. Influence of heavyweight aggregates on the physico-mechanical and radiation attenuation properties of serpentine-based concrete. **Constr Build Mater**, *260*, 120473. doi:10.1016/j.conbuildmat.2020.120473
 12. Masoud, M., El-Khayatt, A., Kansouh, W., Sakr, K., Shahien, M., & Zayed, A. **(2020)**. Insights into the effect of the mineralogical composition of serpentine aggregates on the radiation attenuation properties of their concretes. **Constr Build Mater**, *263*, 120141. doi:10.1016/j.conbuildmat.2020.120141
 13. A. El-Khayatt, M. Al-Rajhi, A. Hassan, and H. Idriss, "Improvement of Shielding Properties of Cement Paste by Slag Addition from Local Steel Industry," *Journal of Testing and Evaluation* *49*, 09 March **2020**, <https://doi.org/10.1520/JTE20190694>.

14. El-Khayatt A.M., Saady H.A. **2020**. Preparation and characterization of zinc, lanthanum white sand glass for use in nuclear applications. *Radiation Physics and Chemistry* 166, 108497.
15. Eyecioğlu Ö, El-Khayatt A. M., Karabul Y, Çağlar M, Toker O Icelli O., **2019**. BXCOSM: a software for computation of radiation sensing. *Radiat. Eff. Defects Solids*, 174, (5-6), 506-518.
16. Baltas H., Sirin M., Celik A., Ustabas İ., El-Khayatt, A. M, 2019. Radiation shielding properties of mortars with minerals and ores additives. *Cement and Concrete Composites* (97), 268–278.
17. El-Khayatt A. M., **2017**. Water Equivalence of some 3D Dosimeters: A Theoretical Study based on Effective Atomic Number and Effective Fast Neutron Removal Cross-Section. *NUCL SCI TECH*, (28): 170. DOI:10.1007/s41365-017-0322-8
18. El-Khayatt A. M., 2017. Semi-empirical determination of gamma-ray kerma coefficients for materials of shielding and dosimetry from mass attenuation coefficients. *Prog. Nucl. Energy*, 98, 277 - 284 DOI: 10.1016/j.pnucene.2017.04.006
19. El-Khayatt A. M., **2017**. Calculation of photon shielding properties for some neutron shielding materials. *NUCL SCI TECH*, (28):69. DOI: 10.1007/s41365-017-0222-y
20. Eyecioğlu Ö, El-Khayatt A. M., Karabul Y, Icelli O., **2017**. A study on compatibility of the experimental effective atomic numbers with those predicted by ZXCOSM program. *NUCL SCI TECH*, (28):63. DOI: 10.1007/s41365-017-0220-0
21. Eyecioğlu Ö, Karabul Y, El-Khayatt A. M., Icelli O., **2016**. ZXCOSM: a Software for Computation of Radiation Sensing Attributes. *Radiat. Eff. Defects Solids*, 171(11-12), 965-977. Doi.org/10.1080/10420150.2016.1263958.
22. Ali A. M., El-Khayatt A. M., Akkurt I., **2016**. Determination of effective atomic number and electron density of heavy metal oxide glasses. *Radiat. Eff. Defects Solids*, 169(12), 1038-1044. DOI: 10.1080/10420150.2016.1170016
23. El-Khayatt A. M., Vega-Carrillo H. R., **2015**. Photon and neutron kerma coefficients for polymer gel dosimeters. *Nucl. Instrum. Methods Phys. Res. A* 792, 6-10. DOI: 10.1016/j.nima.2015.04.033
24. Darwish D.A.E., Abul-Nasr K.T.M., El-Khayatt A.M., **2015**. The assessment of natural radioactivity and its associated radiological hazards and dose parameters in granite samples from South Sinai, Egypt. *J. Radiat. Res. Appl. Sci.* 8, 17-25. [DOI: 10.1016/j.jrras.2014.10.003](https://doi.org/10.1016/j.jrras.2014.10.003)

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BOOK CHAPTERS

45. H. R. Vega-Carrillo, M. G. García-Reyna, C. O. Torres-Cortes, M. R. Martinez-Blanco, J. M. Ortiz-Rodriguez, A. Baltazar-Raigosa, R. Khabaz, A. M. El-Khayatt and V. P. Singh, 2020. Induced gamma-rays as an analytical tool. A Closer Look at Gamma Rays, Nova Science Publishers, Inc. ISBN: 978-1-53616-993-5.
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47. Kurudirek M., Ozdemir Y., El-Khayatt A. M., 2011. Radiation interaction with blast furnace slag: a comparative study from the point of radiation shielding. In: Radiation Exposure in



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Publishers, Inc. USA.

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