K G Mahmoud

List of Publications by Year
in descending order

121 papers	3,354 citations	94433 37 h-index	182427 51 g-index
121 all docs	121 docs citations	121 times ranked	613 citing authors

#	Article	IF	Citations
1	Gamma ray shielding characteristics and exposure buildup factor for some natural rocks using MCNP-5 code. Nuclear Engineering and Technology, 2019, 51, 1835-1841.	2.3	109
2	Optical and radiation shielding features for a new series of borate glass samples. Optik, 2021, 239, 166790.	2.9	101
3	Impact of Bi2O3 modifier concentration on bariumâ€"zincborate glasses: physical, structural, elastic, and radiation-shielding properties. European Physical Journal Plus, 2021, 136, 116.	2.6	94
4	FTIR, UVâ€"Visâ€"NIR spectroscopy, and gamma rays shielding competence of novel ZnO-doped vanadium borophosphate glasses. Journal of Materials Science: Materials in Electronics, 2020, 31, 9099-9113.	2.2	90
5	Novel vanadyl lead-phosphate glasses: P2O5â€"PbOâ€"ZnO Na2Oâ€"V2O5: Synthesis, optical, physical and gamma photon attenuation properties. Journal of Non-Crystalline Solids, 2020, 534, 119944.	3.1	87
6	The influence of MgO on the radiation protection and mechanical properties of tellurite glasses. Nuclear Engineering and Technology, 2021, 53, 2000-2010.	2.3	86
7	The role of PbO/Bi2O3 insertion on the shielding characteristics of novel borate glasses. Ceramics International, 2020, 46, 23357-23368.	4.8	83
8	Role of ZnO on TeO2.Li2O.ZnO glasses for optical and nuclear radiation shielding applications utilizing MCNP5 simulations and WINXCOM program. Journal of Non-Crystalline Solids, 2020, 544, 120162.	3.1	68
9	Influence of modifier oxide on the structural and radiation shielding features of Sm3+-doped calcium telluro-fluoroborate glass systems. Journal of the Australian Ceramic Society, 2021, 57, 275-286.	1.9	67
10	Novel zinc vanadyl boro-phosphate glasses: ZnOâ€"V2O5â€" P2O5â€"B2O3: Physical, thermal, and nuclear radiation shielding properties. Ceramics International, 2020, 46, 19318-19327.	4.8	66
11	The radiation-shielding properties of ternary SiO2â€"SnOâ€"SnF2 glasses: Simulation and theoretical study. Ceramics International, 2020, 46, 23369-23378.	4.8	62
12	The concentration impact of Yb3+ on the bismuth boro-phosphate glasses: Physical, structural, optical, elastic, and radiation-shielding properties. Radiation Physics and Chemistry, 2021, 188, 109617.	2.8	61
13	Ta2O5 reinforced Bi2O3â€"TeO2â€"ZnO glasses: Fabrication, physical, structural characterization, and radiation shielding efficacy. Optical Materials, 2021, 112, 110757.	3.6	59
14	Investigation of the gamma ray shielding properties for polyvinyl chloride reinforced with chalcocite and hematite minerals. Heliyon, 2020, 6, e03560.	3.2	56
15	Effect of Fe2O3 doping on structural, FTIR and radiation shielding characteristics of aluminium-lead-borate glasses. Progress in Nuclear Energy, 2021, 141, 103931.	2.9	56
16	Evaluation of Radiation Shielding Features of Co and Ni-Based Superalloys Using MCNP-5 Code: Potential Use in Nuclear Safety. Applied Sciences (Switzerland), 2020, 10, 7680.	2.5	55
17	Physical, structural, optical and gamma radiation attenuation properties of germanate-tellurite glasses for shielding applications. Journal of Non-Crystalline Solids, 2020, 545, 120250.	3.1	55
18	The role of cadmium oxides in the enhancement of radiation shielding capacities for alkali borate glasses. Ceramics International, 2020, 46, 23337-23346.	4.8	53

#	Article	IF	Citations
19	Novel tellurite glass (60-x)TeO2â€“10GeO2 -20ZnOâ€“10BaO - xBi2O3 for radiation shielding. Journal of Alloys and Compounds, 2020, 844, 155668.	5.5	52
20	The influence of PbO and Bi2O3 on the radiation shielding and elastic features for different glasses. Journal of Materials Research and Technology, 2020, 9, 8429-8438.	5.8	52
21	Direct influence of mercury oxide on structural, optical and radiation shielding properties of a new borate glass system. Ceramics International, 2020, 46, 17978-17986.	4.8	51
22	Germanate oxide impacts on the optical and gamma radiation shielding properties of TeO2-ZnO-Li2O glass system. Journal of Non-Crystalline Solids, 2020, 546, 120272.	3.1	50
23	Ionizing radiation shielding features for titanium borosilicate glass modified with different concentrations of barium oxide. Materials Chemistry and Physics, 2021, 272, 125047.	4.0	50
24	Aggregates grain size and press rate dependence of the shielding parameters for some concretes. Progress in Nuclear Energy, 2020, 118, 103092.	2.9	49
25	Novel borosilicate glass system: Na2B4O7-SiO2-MnO2: Synthesis, average electronics polarizability, optical basicity, and gamma-ray shielding features. Journal of Non-Crystalline Solids, 2021, 553, 120509.	3.1	48
26	A novel CaOâ€“K2Oâ€“Na2Oâ€“P2O5 glass systems for radiation shielding applications. Radiation Physics and Chemistry, 2021, 188, 109645.	2.8	48
27	Evaluation of nuclear radiation shielding competence for ternary Geâ€“Sbâ€“S chalcogenide glasses. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	47
28	Synthesis, structure, mechanical and radiation shielding features of 50SiO2â€“(48â€‰+â€‰X) Na2B4O7â€“(2â€‰â^'â€‰X) MnO2 glasses. European Physical Journal Plus, 2021, 136, 1.	2.6	47
29	Physical and structural effect of modifiers on dysprosium ions incorporated boro-tellurite glasses for radiation shielding purposes. Ceramics International, 2020, 46, 17929-17937.	4.8	46
30	Synthesis, structural, optical and radiation shielding features of tungsten trioxides doped borate glasses using Monte Carlo simulation and phy-X program. Journal of Non-Crystalline Solids, 2020, 543, 120134.	3.1	45
31	Comparative studies between the shielding parameters of concretes with different additive aggregates using MCNP-5 simulation code. Radiation Physics and Chemistry, 2019, 165, 108426.	2.8	44
32	Gamma ray shielding capacity and build up factors of CdO doped lithium borate glasses: theoretical and simulation study. Journal of Non-Crystalline Solids, 2020, 541, 120110.	3.1	43
33	Fabrication, structural, optical, and dielectric properties of PVC-PbO nanocomposites, as well as their gamma-ray shielding capability. Radiation Physics and Chemistry, 2021, 189, 109753.	2.8	42
34	Investigation of radiation shielding properties for some building materials reinforced by basalt powder. AIP Conference Proceedings, 2019, , .	0.4	41
35	The role of B2O3 on the structural, thermal, and radiation protection efficacy of vanadium phosphate glasses. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	40
36	Enhancement of the Shielding Capability of Sodaâ€“Lime Glasses with Sb2O3 Dopant: A Potential Material for Radiation Safety in Nuclear Installations. Applied Sciences (Switzerland), 2021, 11, 326.	2.5	40

#	Article	IF	Citations
37	Applicability of the multispectral remote sensing on determining the natural rock complexes distribution and their evaluability on the radiation protection applications. Radiation Physics and Chemistry, 2022, 193, 110004.	2.8	38
38	Simulation studies for gamma ray shielding properties of Halloysite nanotubes using MCNP-5 code. Applied Radiation and Isotopes, 2019, 154, 108882.	1.5	37
39	Application of the MCNP 5 code to simulate the shielding features of concrete samples with different aggregates. Radiation Physics and Chemistry, 2020, 174, 108925.	2.8	37
40	Impact of Modifier Oxides on Mechanical and Radiation Shielding Properties of B2O3-SrO-TeO2-RO Glasses (Where RO = TiO2, ZnO, BaO, and PbO). Applied Sciences (Switzerland), 2021, 11, 10904.	2.5	36
41	Structure, optical properties, and ionizing radiation shielding performance using Monte Carlo simulation for lead-free BTO perovskite ceramics doped with ZnO, SiO2, and WO3 oxides. Materials Science in Semiconductor Processing, 2022, 145, 106629.	4.0	36
42	Modified halloysite minerals for radiation shielding purposes. Journal of Radiation Research and Applied Sciences, 2020, 13, 94-101.	1.2	34
43	Development of a novel MoO3-doped borate glass network for gamma-ray shielding applications. European Physical Journal Plus, 2021, 136, 1.	2.6	34
44	Study on the radiation attenuation properties of locally available bees-wax as a tissue equivalent bolus material in radiotherapy. Radiation Physics and Chemistry, 2020, 172, 108559.	2.8	29
45	Evaluation of radiation shielding capacity of vanadiumâ€“telluriteâ€“antimonite semiconducting glasses. Optical Materials, 2021, 114, 110897.	3.6	27
46	Advanced nuclear radiation shielding studies of some mafic and ultramafic complexes with lithological mapping. Radiation Physics and Chemistry, 2021, 189, 109777.	2.8	27
47	Evaluation of optical and gamma ray shielding features for tungsten-based bismuth borate glasses. Optical Materials, 2020, 106, 109981.	3.6	27
48	Effect of sintering conditions on the radiation shielding characteristics of YBCO superconducting ceramics. Journal of Physics and Chemistry of Solids, 2022, 164, 110627.	4.0	27
49	Application of experimental measurements, Monte Carlo simulation and theoretical calculation to estimate the gamma ray shielding capacity of various natural rocks. Progress in Nuclear Energy, 2020, 126, 103405.	2.9	25
50	Gamma ray exposure buildup factor and shielding features for some binary alloys using MCNP-5 simulation code. Nuclear Engineering and Technology, 2021, , .	2.3	24
51	Evaluation of optical, and radiation shielding features of New phosphate-based glass system. Optik, 2021, 242, 167220.	2.9	24
52	Multispectral remote sensing for determination the Ultra-mafic complexes distribution and their applications in reducing the equivalent dose from the radioactive wastes. European Physical Journal Plus, 2022, 137, 1.	2.6	24
53	Design and Gamma-Ray Attenuation Features of New Concrete Materials for Low- and Moderate-Photons Energy Protection Applications. Materials, 2022, 15, 4947.	2.9	24
54	The Influence of Titanium Dioxide on Silicate-Based Glasses: An Evaluation of the Mechanical and Radiation Shielding Properties. Materials, 2021, 14, 3414.	2.9	23

#	Article	IF	Citations
55	Synthesis and study of structural, optical and radiation-protective peculiarities of MTiO3 (M = Ba, Sr) metatitanate ceramics mixed with SnO2 oxide. Ceramics International, 2021, 47, 28528-28535.	4.8	23
56	Synthesis of different (RE)BaCuO ceramics, study their structural properties, and tracking their radiation protection efficiency using Monte Carlo simulation. Materials Chemistry and Physics, 2022, 276, 125412.	4.0	23
57	Gamma-ray protection capacity evaluation and satellite data based mapping for the limestone, charnockite, and gneiss rocks in the Sirugudi taluk of the Dindigul district, India. Radiation Physics and Chemistry, 2022, 196, 110108.	2.8	23
58	Tailoring bismuth borate glasses by incorporating PbO/GeO2 for protection against nuclear radiation. Scientific Reports, 2021, 11, 7784.	3.3	22
59	Evaluation of gamma-rays attenuation competences for waste soda-lime glass containing MoO3: Experimental study, XCOM computations, and MCNP-5 results.. Journal of Non-Crystalline Solids, 2021, 557, 120572.	3.1	21
60	Comprehensive study of radiation shielding and mechanical features of Bi2O3-TeO2-B2O3-GeO2 glasses. Journal of the Australian Ceramic Society, 2021, 57, 1267-1274.	1.9	21
61	Evaluation of radiation shielding characteristics of B2O3â€“K2Oâ€“ Li2O - HMO (HMO = TeO2/ SrO) Tj ETQq1 1 0.784314 rgBT /Over 200, 110172.	2.8	21
62	The effect of Nb2O5 on waste sodaâ€lime glass in gammaâ€rays shielding applications. Journal of Materials Science: Materials in Electronics, 2021, 32, 4903-4915.	2.2	19
63	Effect of the Fe2O3 addition on the elastic and gamma-ray shielding features of bismuth sodium-borate glass system. Journal of Materials Science: Materials in Electronics, 2021, 32, 6942-6954.	2.2	19
64	A lanthanum-barium-borovanadate glass containing Bi2O3 for radiation shielding applications. Radiation Physics and Chemistry, 2021, 186, 109557.	2.8	19
65	A comprehensive study on the optical, mechanical, and radiation shielding properties of the TeO2â€“Li2Oâ€“GeO2 glass system. Journal of Materials Science: Materials in Electronics, 2021, 32, 15226-15241.	2.2	18
66	Structural, mechanical, and nuclear radiation shielding properties of iron aluminoleadborate glasses. European Physical Journal Plus, 2021, 136, 1.	2.6	18
67	The effect of CuO additive on the mechanical and radiation shielding features of Li2B4O7â€“Pb2O3 glass system. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2022, 61, 275-283.	1.9	17
68	Theoretical Investigation of the radiation-protection properties of the CBS glass family. Optik, 2022, 258, 168851.	2.9	17
69	Influence of ZnO to the physical, elastic and gamma radiation shielding properties of the tellurite glass system using MCNP-5 simulation code. Radiation Physics and Chemistry, 2021, 188, 109665.	2.8	16
70	A new heavy-mineral doped clay brick for gamma-ray protection purposes. Applied Radiation and Isotopes, 2021, 173, 109720.	1.5	15
71	The influence of BaO on the mechanical and gamma / fast neutron shielding properties of lead phosphate glasses. Nuclear Engineering and Technology, 2021, 53, 3816-3823.	2.3	15
72	Development of Tincal based polypropylene polymeric materials for radiation shielding applications: Experimental, theoretical, and Monte Carlo investigations. Materials Science in Semiconductor Processing, 2022, 146, 106696.	4.0	15

#	Article	IF	Citations
73	Influence of heavy metal oxides to the mechanical and radiation shielding properties of borate and silica glass system. Journal of Materials Research and Technology, 2021, 11, 1322-1330.	5.8	14
74	A comprehensive investigation on the role of PbO in the structural and radiation shielding attribute of P2O5â€"CaOâ€"Na2Oâ€"K2Oâ€"PbO glass system. Journal of Materials Science: Materials in Electronics, 2021, 32, 12371-12382.	2.2	14
75	Synthesis, physical properties, and gammaâ€"ray shielding capacity of different Ni-based super alloys. Radiation Physics and Chemistry, 2021, 186, 109483.	2.8	14
76	Gamma-ray shielding, physical, and structural characteristics of TeO2â€"CdOâ€"PbOâ€"B2O3 glasses. Optical Materials, 2021, 119, 111333.	3.6	14
77	Investigation of the mechanical and radiation shielding features for BaO-WO3-P2O5 glass systems. Optik, 2022, 258, 168810.	2.9	14
78	Simulation of the impact of Bi2O3 on the performance of gamma-ray protection for lithium zinc silicate glasses. Optik, 2022, 257, 168861.	2.9	14
79	Optimizing the gamma-ray shielding behaviors for polypropylene using lead oxide: a detailed examination. Journal of Materials Research and Technology, 2022, 19, 1862-1872.	5.8	14
80	Repercussions of yttrium oxides on radiation shielding capacity of sodium-silicate glass system: experimental and Monte Carlo simulation study. European Physical Journal Plus, 2021, 136, 1.	2.6	13
81	The Role of La2O3 in Enhancement the Radiation Shielding Efficiency of the Tellurite Glasses: Monte-Carlo Simulation and Theoretical Study. Materials, 2021, 14, 3913.	2.9	13
82	Zinc-lead-borate glasses doped with dysprosium oxide: Structure, optical, and radiation shielding features. Optik, 2021, 246, 167765.	2.9	13
83	Evaluation of the Radiation-Protective Properties of Bi (Pb)â€"Srâ€"Caâ€"Cuâ€"O Ceramic Prepared at Different Temperatures with Silver Inclusion. Materials, 2022, 15, 1034.	2.9	12
84	A comprehensive examination of zinc-boro-vanadate glass reinforced with Ag2O in physical, optical, mechanical, and radiation shielding aspects. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	11
85	Tailor made barium borate doped Bi2O3 glass system for radiological protection. Radiation Physics and Chemistry, 2021, 187, 109558.	2.8	11
86	Impact of tin oxide on the structural features and radiation shielding response of some ABO3 perovskites ceramics (Aâ€‰=â€‰Ca, Sr, Ba; Bâ€‰=â€‰Ti). Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	11
87	Synthesis, optical and radiation shielding capacity of the Sm2O3 doped borate glasses. Journal of Non-Crystalline Solids, 2021, 553, 120505.	3.1	10
88	Influence of single-walled carbon nanotubes induced exciton dissociation improvement on hybrid organic photovoltaic devices. Journal of Applied Physics, 2019, 126, .	2.5	9
89	Gamma-ray shielding capacity of different B4C-, Re-, and Ni-based superalloys. European Physical Journal Plus, 2021, 136, 1.	2.6	9
90	Optical and radiation shielding properties of titano-phosphate glasses: influence of BaO. Journal of the Australian Ceramic Society, 2022, 58, 867-880.	1.9	9

#	Article	IF	Citations
91	Radiation shielding competencies for waste sodaâ€“limeâ€“silicate glass reinforced with Ta2O5: experimental, computational, and simulation studies. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	8
92	Fabrication of TeO2-doped strontium borate glasses possessing optimum physical, structural, optical and gamma ray shielding properties. European Physical Journal Plus, 2021, 136, 1.	2.6	8
93	Examinations the optical, mechanical, and shielding properties of Ag2O doped B2O3â€“Bi2O3â€“SrF2â€“Na2O glasses for gamma ray shield applications. Scientific Reports, 2022, 12, 3548.	3.3	8
94	Gamma-rays attenuation by mineralized siltstone and dolostone rocks: Monte Carlo simulation, theoretical and experimental evaluations. Radiation Physics and Chemistry, 2022, 198, 110281.	2.8	8
95	Physical, structural, and gamma ray shielding studies on novel (35+x) PbO-5TeO2-20Bi2O3-(20-x) MgO-20B2O3 glasses. Journal of the Australian Ceramic Society, 2021, 57, 971-981.	1.9	7
96	Synthesis, FTIR, and mechanical as well as radiation shielding characteristics in Nd2O3-doped bismuth lithium borate glasses. Ceramics International, 2022, 48, 12829-12837.	4.8	6
97	Influence of increasing SnO2 content on the mechanical, optical, and gamma-ray shielding characteristics of a lithium zinc borate glass system. Scientific Reports, 2022, 12, 1800.	3.3	6
98	A novel barium oxide-based Iraqi sand glass to attenuate the low gamma-ray energies: Fabrication, mechanical, and radiation protection capacity evaluation. Nuclear Engineering and Technology, 2022, 54, 3051-3058.	2.3	6
99	Tailoring Dy3+/Tb3+-doped lead telluride borate glasses for gamma-ray shielding applications. European Physical Journal Plus, 2021, 136, 1.	2.6	5
100	Structural, optical, and gamma-ray shielding properties of a newly fabricated P2O5â€“B2O3â€“Bi2O3â€“Li2Oâ€“ZrO2 glass system. European Physical Journal Plus, 2021, 136, 1.	2.6	5
101	Gamma ray interaction studies of the PbCl2â€“SnCl2â€“P2O5 bioactive glass system for applications in nuclear medicine. Journal of the Australian Ceramic Society, 2021, 57, 635-642.	1.9	5
102	The role of natural rock filler in optimizing the radiation protection capacity of the intermediate-level radioactive waste containers. Nuclear Engineering and Technology, 2022, 54, 3849-3854.	2.3	5
103	Tm3+ ions-doped phosphate glasses: nuclear shielding competence and elastic moduli. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	4
104	The role of Tb2O3 in enhancement the properties of the La2O3â€“P2O5 glass system: Mechanical and radiation shielding study. Boletin De La Sociedad Espanola De Ceramica Y Vidrio, 2022, 61, 595-603.	1.9	4
105	Radiation shielding, optical, and physical properties of alkali borate glasses modified with Cu2+/Zn2+ ions. Journal of Materials Science: Materials in Electronics, 2021, 32, 19733-19741.	2.2	4
106	Assessment of mechanical and radiation shielding capacity for a ternary CdOâ€“BaOâ€“B2O3 glass system: A comprehensive experimental, Monte Carlo simulation, and theoretical studies. Progress in Nuclear Energy, 2022, 146, 104169.	2.9	4
107	Extensive study of the optical, mechanical properties, and gamma photon shielding effectiveness of potassium titanate biso-phosphate glasses. Journal of Materials Science: Materials in Electronics, 2021, 32, 18145-18162.	2.2	3
108	Developed barium fluoride-based borate glass: Ag2O impacts on optical and gamma-ray attenuation properties. Optik, 2021, 244, 167479.	2.9	3

#	Article	IF	Citations
109	On B2O3/Bi2O3/Na2O/Gd2O3 glasses: synthesis, structure, physical characteristics, and gamma-ray attenuation competence. Applied Physics A: Materials Science and Processing, 2021, 127, 1.	2.3	3
110	Improvement in the design of shielding containers for intermediate-level radioactive waste. Radiation Physics and Chemistry, 2022, 200, 110229.	2.8	3
111	Influence of Li2O Incrementation on Mechanical and Gamma-Ray Shielding Characteristics of a TeO2-As2O3-B2O3 Glass System. Materials, 2021, 14, 4060.	2.9	2
112	Fabrication, structure, physical and optical features of the 50B2O3 +Â25Bi2O3 +Â(25-x) Li2OÂ+ÂxSrO2 glasses. Optik, 2021, 244, 167485.	2.9	2
113	ErBaCuO/PbO ceramic composites: Synthesis, physical properties, and radiation shielding performance. Ceramics International, 2022, 48, 24355-24362.	4.8	2
114	Network-modifying role of Er3+ ions on the structural, optical, mechanical, and radiation shielding properties of ZnF2â€“BaOâ€“Al2O3â€“Li2Oâ€“B2O3 glass. Radiation Physics and Chemistry, 2022, 200, 110228.	2.8	2
115	Newly developed glass samples containing P2O5â€“B2O3â€“Bi2O3â€“Li2Oâ€“CdO and their performance in optical and radiation attenuation applications. Optik, 2021, 242, 167219.	2.9	1
116	Fabrication, physical, linear optical, and nuclear radiation attenuation features of sodium borosilicate glasses. Journal of the Australian Ceramic Society, 2022, 58, 275.	1.9	1
117	Fabrication, characterization, and gamma-ray shielding performance for the lead-based Iraqi white silicate glasses: A closer examination. Optik, 2022, , 169103.	2.9	1
118	Influence of the SrO Insertion to a Binary PbO-B₂O₃ Glass System: Mechanical Properties and Radiation Shielding Study. Transactions of the Indian Ceramic Society, 0, , 1-8.	1.0	1
119	Application of the Monte Carlo simulation method to simulate the radiation shielding capacity of Lithium tungstate composites. AIP Conference Proceedings, 2020, , .	0.4	0
120	A closer look at the impacts of MnO2 on the optical, mechanical, and radiation shielding properties of the B2O3â€“BaF2â€“Li2O glass system of 40B2O3â€‰+â€‰(40-x) BaF2â€‰+â€‰5MgOâ€‰+â€‰15Li2Oâ€‰+â€‰xMnO2. App Materials Science and Processing, 2022, 128, .	2.3	0
121	Suggested two layers container for shielding the low and intermediate activity gamma-ray sources. Radiation Physics and Chemistry, 2022, 199, 110322.	2.8	0