Roman Golovchak

List of Publications by Year
in descending order

113 papers	1,722 citations	304743 22 h-index	377865 34 g-index
113 all docs	113 docs citations	113 times ranked	906 citing authors

#	Article	IF	Citations
1	Structure of Se-rich As-Se glasses by high-resolution x-ray photoelectron spectroscopy. Physical Review B, 2007, 76, .	3.2	81
2	Experimental verification of the reversibility window concept in binary As-Se glasses subjected to a long-term physical aging. Physical Review B, 2008, 78, .	3.2	67
3	Atomistic model of physical ageing in Se-rich Asâ€“Se glasses. Philosophical Magazine, 2007, 87, 4323-4334.	1.6	60
4	Step-wise kinetics of natural physical ageing in arsenic selenide glasses. Journal of Physics Condensed Matter, 2012, 24, 505106.	1.8	54
5	Structural model of homogeneous Asâ€“S glasses derived from Raman spectroscopy and high-resolution XPS. Philosophical Magazine, 2010, 90, 4489-4501.	1.6	52
6	Positronics of subnanometer atomistic imperfections in solids as a high-informative structure characterization tool. Nanoscale Research Letters, 2015, 10, 77.	5.7	48
7	Oxygen incorporation into GST phase-change memory matrix. Applied Surface Science, 2015, 332, 533-541.	6.1	47
8	Physical ageing effects in vitreous arsenic selenides. Solid State Communications, 2006, 137, 67-69.	1.9	44
9	Incorporation of Ga into the structure of Geâ€“Se glasses. Materials Chemistry and Physics, 2013, 138, 909-916.	4.0	43
10	Gamma-irradiation-induced physical ageing in Asâ€“Se glasses. Journal of Non-Crystalline Solids, 2006, 352, 4960-4963.	3.1	42
11	Structural paradigm of Se-rich Geâ€“Se glasses by high-resolution x-ray photoelectron spectroscopy. Journal of Applied Physics, 2009, 105, 103704.	2.5	42
12	Compositional dependences of average positron lifetime in binary Asâ€“S/Se glasses. Physica B: Condensed Matter, 2012, 407, 652-655.	2.7	34
13	Physical ageing in glassy Asâ€“Se induced by above-bandgap photoexposure. Solid State Communications, 2008, 145, 423-426.	1.9	29
14	Long-term ageing behaviour in Geâ€“Se glasses. Journal of Materials Science, 2009, 44, 3962-3967.	3.7	29
15	Long-term physical ageing in Asâ€“Se glasses with short chalcogen chains. Journal of Physics Condensed Matter, 2008, 20, 245101.	1.8	27
16	Coordination defects in bismuth-modified arsenic selenide glasses: High-resolution x-ray photoelectron spectroscopy measurements. Physical Review B, 2008, 77, .	3.2	26
17	Effect of gamma-irradiation on the optical properties of GexAs40â^'xS60 glasses. Physica B: Condensed Matter, 1999, 271, 242-247.	2.7	24
18	A Study of Reversible Î³-Induced Structural Transformations in Vitreous Ge23.5Sb11.8S64.7by High-Resolution X-ray Photoelectron Spectroscopy. Journal of Physical Chemistry B, 2006, 110, 22930-22934.	2.6	24

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19	Light-assisted physical aging in chalcogenide glasses: Dependence on the wavelength of incident photons. Journal of Materials Research, 2011, 26, 2420-2427.	2.6	24
20	Influence of phase separation on the devitrification of 45S5 bioglass. Acta Biomaterialia, 2014, 10, 4878-4886.	8.3	24
21	Topology and chemical order in As Ge Se1â^'2 glasses: A high-resolution X-ray photoelectron spectroscopy study. Journal of Non-Crystalline Solids, 2011, 357, 3454-3460.	3.1	23
22	Radiation effects in physical aging of binary Asâ€"S and Asâ€"Se glasses. Journal of Thermal Analysis and Calorimetry, 2011, 103, 213-218.	3.6	23
23	Temperature-dependent structural relaxation in As40Se60 glass. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3032-3036.	2.1	23
24	Microstructure and luminescent properties of Eu3+-activated MgGa2O4:Mn2+ ceramic phosphors. Journal of Advanced Ceramics, 2020, 9, 432-443.	17.4	23
25	Structure of SbxGe40-xSe60 glasses around 2.67 average coordination number. Journal of Non-Crystalline Solids, 2012, 358, 163-167.	3.1	22
26	Physical aging of chalcogenide glasses. Inorganic Materials, 2010, 46, 911-913.	0.8	21
27	In search of energy landscape for network glasses. Applied Physics Letters, 2011, 98, .	3.3	21
28	Free volume fragmentation in glassy chalcogenides during natural physical ageing as probed by PAL spectroscopy. Journal of Non-Crystalline Solids, 2013, 377, 49-53.	3.1	20
29	On the reversibility window in binary Asâ€"Se glasses. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 370, 504-508.	2.1	19
30	Optical signature of structural relaxation in glassy As10Se90. Journal of Non-Crystalline Solids, 2010, 356, 1149-1152.	3.1	19
31	Complex structural rearrangements in As-Se glasses. Journal of Chemical Physics, 2014, 140, 054505.	3.0	19
32	Cooperative rearranging region size and free volume in Asâ€"Se glasses. Journal of Physics Condensed Matter, 2009, 21, 075105.	1.8	18
33	Short-range order evolution in S-rich Geâ€"S glasses by X-ray photoelectron spectroscopy. Journal of Non-Crystalline Solids, 2011, 357, 1797-1803.	3.1	18
34	Physical aging effects in selenide glasses accelerated by highly energetic Î³-irradiation. Journal of Non-Crystalline Solids, 2006, 352, 704-708.	3.1	17
35	High-energy Î³-irradiation effect on physical ageing in Geâ€"Se glasses. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 2958-2961.	1.4	17
36	Effect of Ga incorporation in the As30Se50Te20 glass. Journal of Non-Crystalline Solids, 2014, 398-399, 19-25.	3.1	17

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37	Study of Ga incorporation in glassy arsenic selenides by high-resolution XPS and EXAFS. Journal of Chemical Physics, 2015, 142, 184501.	3.0	17
38	Cooperativity Scaling and Free Volume in Plasticized Polylactide. Macromolecules, 2019, 52, 6107-6115.	4.8	17
39	Threshold restoration effects in Î³-irradiated chalcogenide glasses. Journal of Non-Crystalline Solids, 2005, 351, 993-997.	3.1	16
40	Reversibility windows in selenide-based chalcogenide glasses. Physica B: Condensed Matter, 2008, 403, 3830-3837.	2.7	16
41	Influence of Bi on topological self-organization in arsenic and germanium selenide networks. Journal of Materials Chemistry C, 2013, 1, 6677.	5.5	16
42	Crystallization of Stoichiometric <scp>SbSI</scp> Glass. Journal of the American Ceramic Society, 2014, 97, 198-205.	3.8	16
43	Structural evolution of Ga-Ge-Te glasses by combined EXAFS and XPS analysis. Journal of Chemical Physics, 2013, 139, 054508.	3.0	15
44	Physical ageing of chalcogenide glasses. , 2014, , 209-264.		14
45	Chemical order in Ga or Sb modified germanium sulfide glasses around stoichiometry: High-resolution XPS and Raman studies. Journal of Non-Crystalline Solids, 2018, 499, 237-244.	3.1	14
46	Amorphous rigidification and cooperativity drop in semiâˆ’crystalline plasticized polylactide. Polymer, 2020, 194, 122373.	3.8	14
47	Crossover between cooperative and fractal relaxation in complex glass-formers. Journal of Physics Condensed Matter, 2016, 28, 355101.	1.8	14
48	Pseudoâ€selfâ€organized topological phases in glassy selenides for IR photonics. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2572-2576.	0.8	13
49	Medium range order and structural relaxation in Asâ€“Se network glasses through FSDP analysis. Materials Chemistry and Physics, 2015, 153, 432-442.	4.0	13
50	Phenomenology of Î³-irradiation-induced changes in optical properties of chalcogenide semiconductor glasses: A case study of binary arsenic sulfides. Journal of Non-Crystalline Solids, 2018, 498, 315-322.	3.1	13
51	Effect of Co 60 Î³-irradiation on the optical properties of Asâ€“Geâ€“S glasses. Journal of Non-Crystalline Solids, 2003, 326-327, 130-134.	3.1	12
52	Gamma Radiation Effects on Physical, Optical, and Structural Properties of Binary <scp><scp>Asâ€“S</scp></scp> Glasses. Journal of the American Ceramic Society, 2012, 95, 1048-1055.	3.8	12
53	FSDP-related correlations in Î³-irradiated chalcogenide semiconductor glasses: The case of glassy arsenic trisulphide g-As2S3 revised. Journal of Physics and Chemistry of Solids, 2013, 74, 1721-1725.	4.0	12
54	Initial stage of physical ageing in network glasses. Philosophical Magazine, 2012, 92, 4182-4193.	1.6	11

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55	Comparative study of extended free-volume defects in As- and Ge-based glassy semiconductors: theoretical prediction and experimental probing with PAL technique. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 117-120.	0.8	11
56	Structural organization of As-rich selenide glasses. Solid State Communications, 2013, 165, 22-26.	1.9	11
57	Compositional trends of Î³-induced optical changes observed in chalcogenide glasses of binary AsS system. Journal of Non-Crystalline Solids, 2014, 386, 95-99.	3.1	11
58	Structural features of spin-coated thin films of binary AsSâˆ' chalcogenide glass system. Thin Solid Films, 2015, 589, 642-648.	1.8	11
59	Structural characterisation of tin fluorophosphate glasses doped with Er2O3. Journal of Commonwealth Law and Legal Education, 2016, 57, 27-31.	0.5	11
60	Comparative study of atomic arrangements in equiatomic GeSe and GeTe films before and after crystallization. Journal of Alloys and Compounds, 2016, 686, 273-280.	5.5	11
61	Physical ageing in vitreous As13.5Ge4.5Se82 modified by high-energy gamma-irradiation. Physica B: Condensed Matter, 2006, 371, 323-326.	2.7	10
62	Radiation-induced physical ageing of the structure of an arsenicâ€"selenide glass. Journal of Physics and Chemistry of Solids, 2007, 68, 901-905.	4.0	10
63	EXAFS spectroscopic refinement of amorphous structures of evaporation-deposited Geâ€"Se films. Journal of Alloys and Compounds, 2015, 622, 189-193.	5.5	10
64	Structural origin of surface transformations in arsenic sulfide thin films upon UV-irradiation. Applied Surface Science, 2017, 394, 604-612.	6.1	10
65	On the problem of relaxation for radiation-induced optical effects in some ternary chalcogenide glasses. Radiation Effects and Defects in Solids, 2001, 153, 211-219.	1.2	9
66	Positron annihilation lifetime spectroscopy of nano/macroporous bioactive glasses. Journal of Materials Research, 2012, 27, 2561-2567.	2.6	9
67	PAL signature of physical ageing in chalcogenide glasses. Physica Status Solidi (B): Basic Research, 2012, 249, 1017-1019.	1.5	9
68	Peculiarities of Ga and Te incorporation in glassy arsenic selenides. Journal of Non-Crystalline Solids, 2015, 429, 104-111.	3.1	9
69	Devitrification of Bi- and Ga-containing germanium-based chalcogenide glasses. Journal of Alloys and Compounds, 2016, 674, 207-217.	5.5	9
70	Near-IR emission of Er3+ ions in CsCl-Ga-Ge-S glasses excited by visible light. Optical Materials, 2017, 72, 195-200.	3.6	9
71	Kinetics of light-assisted physical ageing in chalcogenide glasses. Journal of Materials Science, 2014, 49, 2844-2852.	3.7	8
72	Natural physical aging in glassy Asâ€"Se: A comparative study of chaotic behavior with enhanced results analysis. Journal of Non-Crystalline Solids, 2014, 386, 8-13.	3.1	8

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73	Role of phase separation on the biological performance of 45S5 BioglassÂ®. Journal of Materials Science: Materials in Medicine, 2017, 28, 161.	3.6	8
74	Valence band structure of binary chalcogenide vitreous semiconductors by high-resolution XPS. Semiconductors, 2011, 45, 423-426.	0.5	7
75	Bond-changing structural rearrangement in glassy As3Se7 associated with long-term physical aging. Journal of Non-Crystalline Solids, 2013, 377, 43-45.	3.1	7
76	Wavelength Dependence of Photostructural Transformations in As2S3 Thin Films. Physics Procedia, 2013, 44, 75-81.	1.2	7
77	Photoinduced formation of Ag nanoparticles on the surface of As2S3/Ag thin bilayer. Materials Research Express, 2014, 1, 045025.	1.6	7
78	Optical and thermal properties of Sb/Bi-modified mixed Ge-Ga-Se-Te glasses. Journal of Alloys and Compounds, 2018, 750, 721-728.	5.5	7
79	Application of Positron Annihilation Lifetime Technique for Î³-Irradiation Stresses Study in Chalcogenide Vitreous Semiconductors. Advanced Engineering Materials, 2002, 4, 571-574.	3.5	6
80	Structural basis of temperature-dependent electrical resistance of evaporation-deposited amorphous GeSe film. Scripta Materialia, 2014, 86, 56-59.	5.2	6
81	Giant visible and infrared light attenuation effect in nanostructured narrow-bandgap glasses. Optics Letters, 2018, 43, 387.	3.3	6
82	Cluster modeling of quasiâ€adaptive phases in vitreous germanium selenides. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 921-924.	0.8	5
83	Topological controversies in the adaptability concept for glassy germanium selenides. Journal of Non-Crystalline Solids, 2011, 357, 479-482.	3.1	5
84	Electronic and atomic structure of amorphous thin films with high-resolution XPS: Examples of applications & limitations. Journal of Non-Crystalline Solids, 2013, 377, 155-158.	3.1	5
85	Anisotropic loss of toughness with physical aging of work toughened polycarbonate. Polymer Engineering and Science, 2014, 54, 794-804.	3.1	5
86	Fine kinetics of natural physical ageing in glassy As10Se90. Physica B: Condensed Matter, 2014, 434, 21-25.	2.7	5
87	On the compositional diversity of physical aging kinetics in chalcogenide glasses. Journal of Non-Crystalline Solids, 2016, 437, 1-5.	3.1	5
88	The charge state of titanium ions in Pdâ€doped Ti: CMAS glass and glassâ€ceramics. Journal of the American Ceramic Society, 2017, 100, 2568-2581.	3.8	5
89	Parameterization of photobleaching and photodarkening in-situ kinetics in thermally deposited GeSe2 thin films. Thin Solid Films, 2021, 726, 138659.	1.8	5
90	Title is missing!. Ukrainian Journal of Physical Optics, 2002, 3, 134-143.	13.0	5

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91	Long-term natural physical aging in glassy Ge5Se95 as probed by combined NMR and PAL spectroscopy. Journal of Non-Crystalline Solids, 2014, 392-393, 1-5.	3.1	4
92	Positron annihilation lifetime spectroscopy (PALS) studies of gamma irradiated As2Se3 films used in MIR integrated photonics. Journal of Non-Crystalline Solids, 2017, 455, 29-34.	3.1	4
93	Structural characterization, optical and PAL spectroscopy studies of Er3+-doped Ge20Ga5Sb10S65 glasses. Optical Materials, 2020, 105, 109919.	3.6	4
94	Is the marginality of non-reversible heat flow in MDSC experiments a sufficient criterion for self-organization in network glass-formers?. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 3043-3046.	0.8	3
95	Nature of Pd and Ti Metals in the Structure of <scp>CMAS</scp> Glass and Ceramics. Journal of the American Ceramic Society, 2014, 97, 1971-1978.	3.8	3
96	Structural-relaxation phenomena in Asâ€"S glasses as probed by combined PAL/DBAR technique. Materials Chemistry and Physics, 2015, 155, 76-82.	4.0	3
97	The Structure of Gaï£¿Sbï£¿Se Glasses by Highâ€Resolution Xâ€Ray Photoelectron Spectroscopy. Physica Status Solidi (B): Basic Research, 2021, 258, 2100074.	1.5	3
98	Ovonic threshold switching induced local atomic displacements in amorphous Ge60Se40 film probed via in situ EXAFS under DC electric field. Journal of Non-Crystalline Solids, 2021, 568, 120955.	3.1	3
99	Title is missing!. Ukrainian Journal of Physical Optics, 2006, 7, 18-23.	13.0	3
100	Comment on â€œMolecular origin of aging of pure Se glass: Growth of inter-chain structural correlations, network compaction, and partial orderingâ€•[J. Chem. Phys. 146, 224506 (2017)]. Journal of Chemical Physics, 2018, 148, 157101.	3.0	2
101	Role of Bi and Ga additives in the physical properties and structure of GeSe4-GeTe4 glasses. Materials Characterization, 2018, 142, 50-58.	4.4	2
102	On the temperature behavior of optical gap in arsenic sulphide glasses. Physica Status Solidi (B): Basic Research, 0, , .	1.5	2
103	Physical ageing in the above-bandgap photoexposured glassy arsenic selenides. Journal of Physics: Conference Series, 2007, 79, 012016.	0.4	1
104	Radiation-induced defects in chalcogenide glasses characterized by combined optical spectroscopy, XPS and PALS methods. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1147-1150.	0.8	1
105	Radiation-induced physical ageing in network arsenic-sulfide/selenide glasses. IOP Conference Series: Materials Science and Engineering, 2010, 15, 012056.	0.6	1
106	On the Kinetics Description of Below-T_g Structural Relaxation in Network Glass Formers. Solid State Phenomena, 2013, 200, 162-167.	0.3	1
107	Effect of Gamma Exposure on Chalcogenide Glass Films for Microphotonic Devices. , 2016, , .		1
108	Effect of P/Bi substitution on optical and thermal properties of Ga-Ge-Se-Te glasses. Journal of Alloys and Compounds, 2020, 835, 155224.	5.5	1

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109	On the paradigm of physical aging in stoichiometric As2Se3 glass as illusory manifestation of anti-aging ability in optimally-constrained covalent networks. Coordination Chemistry Reviews, 2021, 449, 214211.	18.8	1
110	Dynamics of structural relaxation in bioactive 45S5 glass. Journal of Physics Condensed Matter, 2020, 32, 295401.	1.8	1
111	On the kinetics description of below-T<inf>g</inf> structural relaxation in network glass formers. , 2012, , .		0
112	Photoresponse of inorganic-organic thin film composites based on chalcogenide glasses. AIP Conference Proceedings, 2018, , .	0.4	0
113	Remedial insight on ageing of glass through the study of ancient manâ€made artefacts. Archaeometry, 2021, 63, 312-326.	1.3	0