

# Roman Golovchak

## List of Publications by Year in descending order

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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	Remedial insight on ageing of glass through the study of ancient man-made artefacts. <i>Archaeometry</i> , 2021, 63, 312-326.	1.3	0
2	The Structure of $\text{Ca}_{1-x}\text{Sb}_x\text{Se}$ Glasses by High-Resolution X-Ray Photoelectron Spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2021, 258, 2100074.	1.5	3
3	Parameterization of photobleaching and photodarkening in-situ kinetics in thermally deposited $\text{GeSe}_2$ thin films. <i>Thin Solid Films</i> , 2021, 726, 138659.	1.8	5
4	On the paradigm of physical aging in stoichiometric $\text{As}_2\text{Se}_3$ glass as illusory manifestation of anti-aging ability in optimally-constrained covalent networks. <i>Coordination Chemistry Reviews</i> , 2021, 449, 214211.	18.8	1
5	Ovonic threshold switching induced local atomic displacements in amorphous $\text{Ge}_{60}\text{Se}_{40}$ film probed via in situ EXAFS under DC electric field. <i>Journal of Non-Crystalline Solids</i> , 2021, 568, 120955.	3.1	3
6	Microstructure and luminescent properties of $\text{Eu}^{3+}$ -activated $\text{MgGa}_2\text{O}_4:\text{Mn}^{2+}$ ceramic phosphors. <i>Journal of Advanced Ceramics</i> , 2020, 9, 432-443.	17.4	23
7	Effect of P/Bi substitution on optical and thermal properties of Ga-Ge-Se-Te glasses. <i>Journal of Alloys and Compounds</i> , 2020, 835, 155224.	5.5	1
8	Structural characterization, optical and PAL spectroscopy studies of $\text{Er}^{3+}$ -doped $\text{Ge}_{20}\text{Ga}_{5}\text{Sb}_{10}\text{Se}_{65}$ glasses. <i>Optical Materials</i> , 2020, 105, 109919.	3.6	4
9	Amorphous rigidification and cooperativity drop in semi-crystalline plasticized polylactide. <i>Polymer</i> , 2020, 194, 122373.	3.8	14
10	Dynamics of structural relaxation in bioactive 45S5 glass. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 295401.	1.8	1
11	Cooperativity Scaling and Free Volume in Plasticized Polylactide. <i>Macromolecules</i> , 2019, 52, 6107-6115.	4.8	17
12	Phenomenology of $\gamma$ -irradiation-induced changes in optical properties of chalcogenide semiconductor glasses: A case study of binary arsenic sulfides. <i>Journal of Non-Crystalline Solids</i> , 2018, 498, 315-322.	3.1	13
13	Comment on "Molecular origin of aging of pure Se glass: Growth of inter-chain structural correlations, network compaction, and partial ordering" [J. Chem. Phys. 146, 224506 (2017)]. <i>Journal of Chemical Physics</i> , 2018, 148, 157101.	3.0	2
14	Optical and thermal properties of Sb/Bi-modified mixed Ge-Ga-Se-Te glasses. <i>Journal of Alloys and Compounds</i> , 2018, 750, 721-728.	5.5	7
15	Role of Bi and Ga additives in the physical properties and structure of $\text{GeSe}_4\text{-GeTe}_4$ glasses. <i>Materials Characterization</i> , 2018, 142, 50-58.	4.4	2
16	Photoresponse of inorganic-organic thin film composites based on chalcogenide glasses. <i>AIP Conference Proceedings</i> , 2018, .	0.4	0
17	Giant visible and infrared light attenuation effect in nanostructured narrow-bandgap glasses. <i>Optics Letters</i> , 2018, 43, 387.	3.3	6
18	Chemical order in Ga or Sb modified germanium sulfide glasses around stoichiometry: High-resolution XPS and Raman studies. <i>Journal of Non-Crystalline Solids</i> , 2018, 499, 237-244.	3.1	14

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19	The charge state of titanium ions in Pd-doped Ti: CMAS glass and glass-ceramics. Journal of the American Ceramic Society, 2017, 100, 2568-2581.	3.8	5
20	Role of phase separation on the biological performance of 45S5 Bioglass®. Journal of Materials Science: Materials in Medicine, 2017, 28, 161.	3.6	8
21	Near-IR emission of Er <sup>3+</sup> ions in CsCl-Ga-Ge-S glasses excited by visible light. Optical Materials, 2017, 72, 195-200.	3.6	9
22	Positron annihilation lifetime spectroscopy (PALS) studies of gamma irradiated As <sub>2</sub> Se <sub>3</sub> films used in MIR integrated photonics. Journal of Non-Crystalline Solids, 2017, 455, 29-34.	3.1	4
23	Structural origin of surface transformations in arsenic sulfide thin films upon UV-irradiation. Applied Surface Science, 2017, 394, 604-612.	6.1	10
24	Structural characterisation of tin fluorophosphate glasses doped with Er <sub>2</sub> O <sub>3</sub> . Journal of Commonwealth Law and Legal Education, 2016, 57, 27-31.	0.5	11
25	Effect of Gamma Exposure on Chalcogenide Glass Films for Microphotonic Devices. , 2016, , .		1
26	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
27	On the compositional diversity of physical aging kinetics in chalcogenide glasses. Journal of Non-Crystalline Solids, 2016, 437, 1-5.	3.1	5
28	Devitrification of Bi- and Ga-containing germanium-based chalcogenide glasses. Journal of Alloys and Compounds, 2016, 674, 207-217.	5.5	9
29	Crossover between cooperative and fractal relaxation in complex glass-formers. Journal of Physics Condensed Matter, 2016, 28, 355101.	1.8	14
30	Structural-relaxation phenomena in As-S glasses as probed by combined PAL/DBAR technique. Materials Chemistry and Physics, 2015, 155, 76-82.	4.0	3
31	Oxygen incorporation into GST phase-change memory matrix. Applied Surface Science, 2015, 332, 533-541.	6.1	47
32	Medium range order and structural relaxation in As-Se network glasses through FSDP analysis. Materials Chemistry and Physics, 2015, 153, 432-442.	4.0	13
33	Structural features of spin-coated thin films of binary As-S chalcogenide glass system. Thin Solid Films, 2015, 589, 642-648.	1.8	11
34	Positronics of subnanometer atomistic imperfections in solids as a high-informative structure characterization tool. Nanoscale Research Letters, 2015, 10, 77.	5.7	48
35	Study of Ga incorporation in glassy arsenic selenides by high-resolution XPS and EXAFS. Journal of Chemical Physics, 2015, 142, 184501.	3.0	17
36	Peculiarities of Ga and Te incorporation in glassy arsenic selenides. Journal of Non-Crystalline Solids, 2015, 429, 104-111.	3.1	9

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37	EXAFS spectroscopic refinement of amorphous structures of evaporation-deposited GeSe films. <i>Journal of Alloys and Compounds</i> , 2015, 622, 189-193.	5.5	10
38	Photoinduced formation of Ag nanoparticles on the surface of As <sub>2</sub> S <sub>3</sub> /Ag thin bilayer. <i>Materials Research Express</i> , 2014, 1, 045025.	1.6	7
39	Complex structural rearrangements in As-Se glasses. <i>Journal of Chemical Physics</i> , 2014, 140, 054505.	3.0	19
40	Anisotropic loss of toughness with physical aging of work toughened polycarbonate. <i>Polymer Engineering and Science</i> , 2014, 54, 794-804.	3.1	5
41	Crystallization of Stoichiometric $\langle \text{SbSI} \rangle$ Glass. <i>Journal of the American Ceramic Society</i> , 2014, 97, 198-205.	3.8	16
42	Fine kinetics of natural physical ageing in glassy As <sub>10</sub> Se <sub>90</sub> . <i>Physica B: Condensed Matter</i> , 2014, 434, 21-25.	2.7	5
43	Physical ageing of chalcogenide glasses. , 2014, , 209-264.		14
44	Long-term natural physical aging in glassy Ge <sub>5</sub> Se <sub>95</sub> as probed by combined NMR and PAL spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2014, 392-393, 1-5.	3.1	4
45	Effect of Ga incorporation in the As <sub>30</sub> Se <sub>50</sub> Te <sub>20</sub> glass. <i>Journal of Non-Crystalline Solids</i> , 2014, 398-399, 19-25.	3.1	17
46	Compositional trends of $\hat{\Gamma}^3$ -induced optical changes observed in chalcogenide glasses of binary AsS system. <i>Journal of Non-Crystalline Solids</i> , 2014, 386, 95-99.	3.1	11
47	Kinetics of light-assisted physical ageing in chalcogenide glasses. <i>Journal of Materials Science</i> , 2014, 49, 2844-2852.	3.7	8
48	Natural physical aging in glassy AsSe: A comparative study of chaotic behavior with enhanced results analysis. <i>Journal of Non-Crystalline Solids</i> , 2014, 386, 8-13.	3.1	8
49	Influence of phase separation on the devitrification of 45S5 bioglass. <i>Acta Biomaterialia</i> , 2014, 10, 4878-4886.	8.3	24
50	Nature of Pd and Ti Metals in the Structure of $\langle \text{CMAS} \rangle$ Glass and Ceramics. <i>Journal of the American Ceramic Society</i> , 2014, 97, 1971-1978.	3.8	3
51	Structural basis of temperature-dependent electrical resistance of evaporation-deposited amorphous GeSe film. <i>Scripta Materialia</i> , 2014, 86, 56-59.	5.2	6
52	FSDP-related correlations in $\hat{\Gamma}^3$ -irradiated chalcogenide semiconductor glasses: The case of glassy arsenic trisulphide g-As <sub>2</sub> S <sub>3</sub> revised. <i>Journal of Physics and Chemistry of Solids</i> , 2013, 74, 1721-1725.	4.0	12
53	Free volume fragmentation in glassy chalcogenides during natural physical ageing as probed by PAL spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2013, 377, 49-53.	3.1	20
54	Structural evolution of Ga-Ge-Te glasses by combined EXAFS and XPS analysis. <i>Journal of Chemical Physics</i> , 2013, 139, 054508.	3.0	15

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55	Electronic and atomic structure of amorphous thin films with high-resolution XPS: Examples of applications & limitations. <i>Journal of Non-Crystalline Solids</i> , 2013, 377, 155-158.	3.1	5
56	Influence of Bi on topological self-organization in arsenic and germanium selenide networks. <i>Journal of Materials Chemistry C</i> , 2013, 1, 6677.	5.5	16
57	Comparative study of extended free-volume defects in As- and Ge-based glassy semiconductors: theoretical prediction and experimental probing with PAL technique. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2013, 10, 117-120.	0.8	11
58	Bond-changing structural rearrangement in glassy As <sub>3</sub> Se <sub>7</sub> associated with long-term physical aging. <i>Journal of Non-Crystalline Solids</i> , 2013, 377, 43-45.	3.1	7
59	Incorporation of Ga into the structure of Ge-As-Se glasses. <i>Materials Chemistry and Physics</i> , 2013, 138, 909-916.	4.0	43
60	Structural organization of As-rich selenide glasses. <i>Solid State Communications</i> , 2013, 165, 22-26.	1.9	11
61	Wavelength Dependence of Photostructural Transformations in As <sub>2</sub> S <sub>3</sub> Thin Films. <i>Physics Procedia</i> , 2013, 44, 75-81.	1.2	7
62	On the Kinetics Description of Below-T <sub>g</sub> Structural Relaxation in Network Glass Formers. <i>Solid State Phenomena</i> , 2013, 200, 162-167.	0.3	1
63	Gamma Radiation Effects on Physical, Optical, and Structural Properties of Binary As-S Glasses. <i>Journal of the American Ceramic Society</i> , 2012, 95, 1048-1055.	3.8	12
64	Positron annihilation lifetime spectroscopy of nano/macroporous bioactive glasses. <i>Journal of Materials Research</i> , 2012, 27, 2561-2567.	2.6	9
65	On the kinetics description of below-T <sub>g</sub> structural relaxation in network glass formers. , 2012, , .		0
66	Initial stage of physical ageing in network glasses. <i>Philosophical Magazine</i> , 2012, 92, 4182-4193.	1.6	11
67	Structure of Sb <sub>x</sub> Ge <sub>40-x</sub> Se <sub>60</sub> glasses around 2.67 average coordination number. <i>Journal of Non-Crystalline Solids</i> , 2012, 358, 163-167.	3.1	22
68	Step-wise kinetics of natural physical ageing in arsenic selenide glasses. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 505106.	1.8	54
69	PAL signature of physical ageing in chalcogenide glasses. <i>Physica Status Solidi (B): Basic Research</i> , 2012, 249, 1017-1019.	1.5	9
70	Compositional dependences of average positron lifetime in binary As-S/Se glasses. <i>Physica B: Condensed Matter</i> , 2012, 407, 652-655.	2.7	34
71	In search of energy landscape for network glasses. <i>Applied Physics Letters</i> , 2011, 98, .	3.3	21
72	Topological controversies in the adaptability concept for glassy germanium selenides. <i>Journal of Non-Crystalline Solids</i> , 2011, 357, 479-482.	3.1	5

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73	Short-range order evolution in S-rich Ge <sup>10</sup> S glasses by X-ray photoelectron spectroscopy. Journal of Non-Crystalline Solids, 2011, 357, 1797-1803.	3.1	18
74	Topology and chemical order in As <sub>2</sub> GeSe <sub>11</sub> glasses: A high-resolution X-ray photoelectron spectroscopy study. Journal of Non-Crystalline Solids, 2011, 357, 3454-3460.	3.1	23
75	Valence band structure of binary chalcogenide vitreous semiconductors by high-resolution XPS. Semiconductors, 2011, 45, 423-426.	0.5	7
76	Radiation effects in physical aging of binary As <sup>10</sup> S and As <sup>10</sup> Se glasses. Journal of Thermal Analysis and Calorimetry, 2011, 103, 213-218.	3.6	23
77	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
78	Pseudo-self-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
79	Temperature-dependent structural relaxation in As <sub>40</sub> Se <sub>60</sub> glass. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 3032-3036.	2.1	23
80	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
81	Radiation-induced physical ageing in network arsenic-sulfide/selenide glasses. IOP Conference Series: Materials Science and Engineering, 2010, 15, 012056.	0.6	1
82	Cluster modeling of quasi-adaptive phases in vitreous germanium selenides. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 921-924.	0.8	5
83	Physical aging of chalcogenide glasses. Inorganic Materials, 2010, 46, 911-913.	0.8	21
84	Optical signature of structural relaxation in glassy As <sub>10</sub> Se <sub>90</sub> . Journal of Non-Crystalline Solids, 2010, 356, 1149-1152.	3.1	19
85	Structural model of homogeneous As <sup>10</sup> S glasses derived from Raman spectroscopy and high-resolution XPS. Philosophical Magazine, 2010, 90, 4489-4501.	1.6	52
86	High-energy <sup>137</sup> Irradiation effect on physical ageing in Ge <sup>10</sup> Se glasses. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 2958-2961.	1.4	17
87	Long-term ageing behaviour in Ge <sup>10</sup> Se glasses. Journal of Materials Science, 2009, 44, 3962-3967.	3.7	29
88	Structural paradigm of Se-rich Ge <sup>10</sup> Se glasses by high-resolution x-ray photoelectron spectroscopy. Journal of Applied Physics, 2009, 105, 103704.	2.5	42
89	Cooperative rearranging region size and free volume in As <sup>10</sup> Se glasses. Journal of Physics Condensed Matter, 2009, 21, 075105.	1.8	18
90	Physical ageing in glassy As <sup>10</sup> Se induced by above-bandgap photoexposure. Solid State Communications, 2008, 145, 423-426.	1.9	29

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91	Reversibility windows in selenide-based chalcogenide glasses. <i>Physica B: Condensed Matter</i> , 2008, 403, 3830-3837.	2.7	16
92	Long-term physical ageing in As <sup>3+</sup> Se glasses with short chalcogen chains. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 245101.	1.8	27
93	Coordination defects in bismuth-modified arsenic selenide glasses: High-resolution x-ray photoelectron spectroscopy measurements. <i>Physical Review B</i> , 2008, 77, .	3.2	26
94	Experimental verification of the reversibility window concept in binary As-Se glasses subjected to a long-term physical aging. <i>Physical Review B</i> , 2008, 78, .	3.2	67
95	Physical ageing in the above-bandgap photoexposed glassy arsenic selenides. <i>Journal of Physics: Conference Series</i> , 2007, 79, 012016.	0.4	1
96	Atomistic model of physical ageing in Se-rich As <sup>3+</sup> Se glasses. <i>Philosophical Magazine</i> , 2007, 87, 4323-4334.	1.6	60
97	Structure of Se-rich As-Se glasses by high-resolution x-ray photoelectron spectroscopy. <i>Physical Review B</i> , 2007, 76, .	3.2	81
98	On the reversibility window in binary As <sup>3+</sup> Se glasses. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2007, 370, 504-508.	2.1	19
99	Radiation-induced physical ageing of the structure of an arsenic <sup>3+</sup> selenide glass. <i>Journal of Physics and Chemistry of Solids</i> , 2007, 68, 901-905.	4.0	10
100	Radiation-induced defects in chalcogenide glasses characterized by combined optical spectroscopy, XPS and PALS methods. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007, 4, 1147-1150.	0.8	1
101	A Study of Reversible $\hat{\Gamma}^3$ -Induced Structural Transformations in Vitreous Ge <sub>23.5</sub> Sb <sub>11.8</sub> S <sub>64.7</sub> by High-Resolution X-ray Photoelectron Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2006, 110, 22930-22934.	2.6	24
102	Physical aging effects in selenide glasses accelerated by highly energetic $\hat{\Gamma}^3$ -irradiation. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 704-708.	3.1	17
103	Gamma-irradiation-induced physical ageing in As <sup>3+</sup> Se glasses. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 4960-4963.	3.1	42
104	Physical ageing in vitreous As <sub>13.5</sub> Ge <sub>4.5</sub> Se <sub>82</sub> modified by high-energy gamma-irradiation. <i>Physica B: Condensed Matter</i> , 2006, 371, 323-326.	2.7	10
105	Physical ageing effects in vitreous arsenic selenides. <i>Solid State Communications</i> , 2006, 137, 67-69.	1.9	44
106	Title is missing!. <i>Ukrainian Journal of Physical Optics</i> , 2006, 7, 18-23.	13.0	3
107	Threshold restoration effects in $\hat{\Gamma}^3$ -irradiated chalcogenide glasses. <i>Journal of Non-Crystalline Solids</i> , 2005, 351, 993-997.	3.1	16
108	Effect of Co $^{60}\hat{\Gamma}^3$ -irradiation on the optical properties of As <sup>3+</sup> Ge <sup>3+</sup> S glasses. <i>Journal of Non-Crystalline Solids</i> , 2003, 326-327, 130-134.	3.1	12

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109	Application of Positron Annihilation Lifetime Technique for $\hat{\Gamma}^3$ -Irradiation Stresses Study in Chalcogenide Vitreous Semiconductors. <i>Advanced Engineering Materials</i> , 2002, 4, 571-574.	3.5	6
110	Title is missing!. <i>Ukrainian Journal of Physical Optics</i> , 2002, 3, 134-143.	13.0	5
111	On the problem of relaxation for radiation-induced optical effects in some ternary chalcogenide glasses. <i>Radiation Effects and Defects in Solids</i> , 2001, 153, 211-219.	1.2	9
112	Effect of gamma-irradiation on the optical properties of $\text{Ge}_{40}\text{As}_{40}\text{S}_{20}$ glasses. <i>Physica B: Condensed Matter</i> , 1999, 271, 242-247.	2.7	24
113	On the temperature behavior of optical gap in arsenic sulphide glasses. <i>Physica Status Solidi (B): Basic Research</i> , 0, , .	1.5	2