Jiri Orava

List of Publications by Year in descending order

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		279798	265206
79	2,037	23	42
papers	citations	h-index	g-index

80	80	80	1880
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Characterization of supercooled liquid Ge2Sb2Te5 and its crystallization by ultrafast-heating calorimetry. Nature Materials, 2012, 11, 279-283.	27.5	423
2	Fragileâ€toâ€Strong Crossover in Supercooled Liquid Agâ€Inâ€Sbâ€Te Studied by Ultrafast Calorimetry. Advanced Functional Materials, 2015, 25, 4851-4858.	14.9	109
3	Fast and slow crystal growth kinetics in glass-forming melts. Journal of Chemical Physics, 2014, 140, 214504.	3.0	93
4	Optical properties and phase change transition in Ge2Sb2Te5 flash evaporated thin films studied by temperature dependent spectroscopic ellipsometry. Journal of Applied Physics, 2008, 104, .	2.5	84
5	Mesoscale engineering of photonic glass for tunable luminescence. NPG Asia Materials, 2016, 8, e318-e318.	7.9	72
6	On cryothermal cycling as a method for inducing structural changes in metallic glasses. NPG Asia Materials, 2018, 10, 137-145.	7.9	68
7	Controlling Selective Doping and Energy Transfer between Transition Metal and Rare Earth Ions in Nanostructured Glassy Solids. Advanced Optical Materials, 2018, 6, 1701407.	7.3	64
8	Classical-nucleation-theory analysis of priming in chalcogenide phase-change memory. Acta Materialia, 2017, 139, 226-235.	7.9	56
9	Embossing of chalcogenide glasses: monomode rib optical waveguides in evaporated thin films. Optics Letters, 2009, 34, 1234.	3.3	55
10	Kissinger method applied to the crystallization of glass-forming liquids: Regimes revealed by ultra-fast-heating calorimetry. Thermochimica Acta, 2015, 603, 63-68.	2.7	46
11	Ultra-fast calorimetry study of Ge₂Sb₂Te₅ crystallization between dielectric layers. Applied Physics Letters, 2012, 101, 091906.	3.3	43
12	Viscosity of liquid Agâ€“Inâ€“Sbâ€“Te: Evidence of a fragile-to-strong crossover. Journal of Chemical Physics, 2016, 144, 194503.	3.0	39
13	Soft imprint lithography of a bulk chalcogenide glass. Optical Materials Express, 2011, 1, 796.	3.0	36
14	Inverse opal photonic crystal of chalcogenide glass by solution processing. Journal of Colloid and Interface Science, 2011, 353, 454-458.	9.4	35
15	Optical and structural properties of Geâ€“Se bulk glasses and Agâ€“Geâ€“Se thin films. Journal of Non-Crystalline Solids, 2009, 355, 1951-1954.	3.1	31
16	The elastic-strain energy criterion of phase formation for complex concentrated alloys. Materialia, 2019, 5, 100222.	2.7	29
17	In-situ measurement of reversible photodarkening in ion-conducting chalcohalide glass. Optics Express, 2008, 16, 1466.	3.4	28
18	Carbon nanotubeâ€”chalcogenide glass composite. Journal of Solid State Chemistry, 2010, 183, 144-149.	2.9	28

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19	Surface morphology of spin-coated Asâ€“Sâ€“Se chalcogenide thin films. Journal of Non-Crystalline Solids, 2007, 353, 1437-1440.	3.1	27
20	Sub-micrometer soft lithography of a bulk chalcogenide glass. Optics Express, 2013, 21, 9584.	3.4	25
21	In situ correlation between metastable phase-transformation mechanism and kinetics in a metallic glass. Nature Communications, 2021, 12, 2839.	12.8	25
22	Selective wet-etching of undoped and silver photodoped amorphous thin films of chalcogenide glasses in inorganic alkaline solutions. Journal of Non-Crystalline Solids, 2006, 352, 1637-1640.	3.1	24
23	The comparison of Agâ€“As33S67 films prepared by thermal evaporation (TE), spin-coating (SC) and a pulsed laser deposition (PLD). Journal of Physics and Chemistry of Solids, 2007, 68, 953-957.	4.0	24
24	Optical properties of As33S67â^'xSex bulk glasses studied by spectroscopic ellipsometry. Journal of Applied Physics, 2008, 103, .	2.5	24
25	Selective wet-etching and characterization of chalcogenide thin films in inorganic alkaline solutions. Journal of Non-Crystalline Solids, 2007, 353, 1441-1445.	3.1	22
26	Fast-heating-induced formation of metallic-glass/crystal composites with enhanced plasticity. Thermochimica Acta, 2019, 677, 198-205.	2.7	22
27	Properties and structure of Agx(As0.33S0.67)100â^'x bulk glasses. Journal of Non-Crystalline Solids, 2007, 353, 1232-1237.	3.1	21
28	Deposition techniques for chalcogenide thin films. , 2014, , 265-309.		21
29	Elemental re-distribution inside shear bands revealed by correlative atom-probe tomography and electron microscopy in a deformed metallic glass. Scripta Materialia, 2019, 168, 14-18.	5.2	21
30	Amorphous films of Agâ€“Asâ€“S system prepared by spin-coating technique, preparation techniques and films physico-chemical properties. Vacuum, 2004, 76, 191-194.	3.5	20
31	Reversible Amorphousâ€toâ€Amorphous Transitions in Chalcogenide Films: Correlating Changes in Structure and Optical Properties. Advanced Functional Materials, 2013, 23, 2052-2059.	14.9	20
32	Direct laser writing of relief diffraction gratings into a bulk chalcogenide glass. Journal of the Optical Society of America B: Optical Physics, 2012, 29, 2779.	2.1	19
33	Phase transformations in a Cuâ€“Zrâ€“Al metallic glass. Scripta Materialia, 2020, 183, 61-65.	5.2	19
34	Mid-infrared integrated optics: versatile hot embossing of mid-infrared glasses for on-chip planar waveguides for molecular sensing. Optical Engineering, 2014, 53, 071824.	1.0	18
35	Fast crystal growth in glass-forming liquids. Journal of Non-Crystalline Solids, 2016, 451, 94-100.	3.1	18
36	Stimulation of shear-transformation zones in metallic glasses by cryogenic thermal cycling. Journal of Non-Crystalline Solids, 2020, 548, 120299.	3.1	17

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37	Planar quarter wave stacks prepared from chalcogenide Geâ€“Se and polymer polystyrene thin films. Journal of Physics and Chemistry of Solids, 2007, 68, 2376-2380.	4.0	14
38	Reversible photoinduced change of refractive index in ion-conducting chalcohalide glass. Applied Physics Letters, 2008, 92, .	3.3	14
39	Correlating ultrafast calorimetry, viscosity, and structural measurements in liquid GeTe and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Ge</mml:mi><mml:mn>15</mml:mn></ Physical Review Materials, 2018, 2, .	2.4	13
40	Selective wet-etching of amorphous/crystallized Agâ€“Asâ€“S and Agâ€“Asâ€“Sâ€“Se chalcogenide thin films. Journal of Physics and Chemistry of Solids, 2007, 68, 1008-1013.	4.0	12
41	Ag diffusion in amorphous As50Se50 films studied by XPS. Journal of Non-Crystalline Solids, 2009, 355, 1844-1848.	3.1	12
42	Scalable In-Fiber Manufacture of Functional Composite Particles. ACS Nano, 2018, 12, 11130-11138.	14.6	12
43	Liquid-to-liquid transition around the glass-transition temperature in a glass-forming metallic liquid. Acta Materialia, 2022, 225, 117588.	7.9	12
44	Multilayer planar structures prepared from chalcogenide thin films of Asâ€“Se and Geâ€“Se systems and polymer thin films using thermal evaporation and spin-coating techniques. Journal of Non-Crystalline Solids, 2008, 354, 529-532.	3.1	11
45	Preparation of dielectric mirrors from high-refractive index contrast amorphous chalcogenide films. Journal of Physics and Chemistry of Solids, 2008, 69, 2070-2074.	4.0	10
46	Selective dissolution of Ag (As0.33S0.67â^'Se)100â^' chalcogenide thin films. Journal of Non-Crystalline Solids, 2008, 354, 533-539.	3.1	10
47	Medium-term thermal stability of amorphous Ge2Sb2Te5 flash-evaporated thin films with regards to change in structure and optical properties. Thin Solid Films, 2009, 517, 4694-4697.	1.8	10
48	Near infrared quazi-omnidirectional reflector in chalcogenide glasses. Optical Materials, 2009, 32, 154-158.	3.6	10
49	Structure, electrical, optical and thermal properties of Ge4Sb4Te (x= 8, 9 and 10) thin films. Journal of Non-Crystalline Solids, 2009, 355, 1998-2002.	3.1	10
50	Large-area inverse opal structures in a bulk chalcogenide glass by spin-coating and thin-film transfer. Optical Materials, 2013, 36, 390-395.	3.6	10
51	Optically transparent magnetic and electrically conductive Feâ€“Crâ€“Zr ultraâ€thin films. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 999-1004.	1.8	10
52	Kinetically facilitated liquid-liquid transition in a metallic liquid. Acta Materialia, 2022, 230, 117834.	7.9	10
53	Multilayer systems of alternating chalcogenide Asâ€“Se and polymer thin films prepared using thermal evaporation and spin-coating techniques. Journal of Physics and Chemistry of Solids, 2007, 68, 1268-1271.	4.0	9
54	1D-photonic crystals prepared from the amorphous chalcogenide films. Journal of Materials Science: Materials in Electronics, 2009, 20, 346-350.	2.2	9

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55	On the atomic structure of thin amorphous Geâ€“Sbâ€“Te films. Physica Status Solidi (B): Basic Research, 2009, 246, 1871-1874.	1.5	9
56	Fast-current-heating devices to study in situ phase formation in metallic glasses by using high-energy synchrotron radiation. Review of Scientific Instruments, 2020, 91, 073901.	1.3	9
57	All-chalcogenide middle infrared dielectric reflector and filter. Journal of Non-Crystalline Solids, 2011, 357, 157-160.	3.1	8
58	Chalcogenides for Phase-Change Memory. Handbook of Thermal Analysis and Calorimetry, 2018, 6, 685-734.	1.6	8
59	Soft x-ray induced Ag diffusion in amorphous pulse laser deposited As50Se50 thin films: An x-ray photoelectron and secondary ion mass spectroscopy study. Journal of Applied Physics, 2008, 104, 043704.	2.5	7
60	Spectroscopic properties of Ni2+ and rare-earth codoped Geâ€“Gaâ€“Sbâ€“S glass. Journal of Physics and Chemistry of Solids, 2010, 71, 30-34.	4.0	7
61	The optical properties of chalcogenide glasses: From measurement to electromagnetic simulation tools. , 2010, , .		7
62	Planar chalcogenide quarter wave stack filter for near-infrared. Journal of Non-Crystalline Solids, 2009, 355, 1521-1525.	3.1	6
63	Structural Stability of the High-Aluminium Zinc Alloys Modified with Ti Addition. Archives of Foundry Engineering, 2012, 12, .	0.4	6
64	In-situ study of athermal reversible photocrystallization in a chalcogenide glass. Journal of Applied Physics, 2017, 122, .	2.5	6
65	Rejuvenation through plastic deformation of a La-based metallic glass measured by fast-scanning calorimetry. Journal of Non-Crystalline Solids: X, 2020, 8, 100051.	1.2	6
66	Effect of high-temperature up-quenching on stabilizing off-eutectic metallic glasses. Physical Review B, 2021, 103, .	3.2	6
67	Regulated color-changing metallic glasses. Journal of Alloys and Compounds, 2021, 876, 160139.	5.5	6
68	Limits of the copper decoration technique for delineating of the Vâ€“I boundary. Journal of Physics and Chemistry of Solids, 2007, 68, 1157-1160.	4.0	5
69	Reversible migration of silver on memorized pathways in Ag-Ge40S60 films. AIP Advances, 2015, 5, .	1.3	5
70	Preferred location for conducting filament formation in thin-film nano-ionic electrolyte: study of microstructure by atom-probe tomography. Journal of Materials Science: Materials in Electronics, 2017, 28, 6846-6851.	2.2	3
71	Dynamic relaxations of a metallic glass studied on cooling. Journal of Alloys and Compounds, 2020, 846, 156426.	5.5	3
72	Optical properties of conductive ZnO films near infrared frequency. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S110.	0.8	2

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73	Optical properties of chalcogenide multilayer deposited on Au layer. Journal of Non-Crystalline Solids, 2009, 355, 1947-1950.	3.1	2
74	Photoluminescence in pulsed-laser deposited GeGaSbS:Er films. Optical Materials, 2018, 85, 246-253.	3.6	1
75	Contrast of color-changing metallic glasses reveals the glass properties beneath the surface. Journal of Alloys and Compounds, 2022, 901, 163674.	5.5	1
76	Electromagnetic field distribution modelling in microlenses fabrication process. Journal of Physics and Chemistry of Solids, 2007, 68, 887-890.	4.0	0
77	Technologies for the fabrication of photonic devices based on chalcogenide glasses. , 2008, , .		0
78	Characterization of RF magnetron sputtered Se-doped Ge2Sb2.3Te5 thin films. Materials Research Society Symposia Proceedings, 2008, 1072, 1.	0.1	0
79	Planar Quarter Wave Stack Reflectors Prepared from Chalcogenide Ge-Se and Polymer Polystyrene Thin Films. , 0, , .		0