

Maria Mitkova

List of Publications by Year in descending order

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114
papers

2,749
citations

279487

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119
all docs

119
docs citations

119
times ranked

1731
citing authors

#	ARTICLE	IF	CITATIONS
1	Nanoscale Memory Elements Based on Solid-State Electrolytes. IEEE Nanotechnology Magazine, 2005, 4, 331-338.	1.1	485
2	A Low-Power Nonvolatile Switching Element Based on Copper-Tungsten Oxide Solid Electrolyte. IEEE Nanotechnology Magazine, 2006, 5, 535-544.	1.1	199
3	Dual Chemical Role of Ag as an Additive in Chalcogenide Glasses. Physical Review Letters, 1999, 83, 3848-3851.	2.9	152
4	Silver incorporation in Ge ³⁰ Se ⁷⁰ glasses used in programmable metallization cell devices. Journal of Non-Crystalline Solids, 2002, 299-302, 1023-1027.	1.5	130
5	Mass transport in chalcogenide electrolyte films – materials and applications. Journal of Non-Crystalline Solids, 2006, 352, 567-577.	1.5	119
6	Information storage using nanoscale electrodeposition of metal in solid electrolytes. Superlattices and Microstructures, 2003, 34, 459-465.	1.4	111
7	Influence of Cu diffusion conditions on the switching of Cu ¹ /SiO ₂ -based resistive memory devices. Thin Solid Films, 2010, 518, 3293-3298.	0.8	80
8	Molecular structure, glass transition temperature variation, agglomeration theory, and network connectivity of binary P-Se glasses. Physical Review B, 2001, 64, .	1.1	66
9	Nanoscale phase separation in Ag ¹ /Ge ³⁰ Se ⁷⁰ glasses. Microelectronic Engineering, 2002, 63, 155-159.	1.1	64
10	Thermal and photodiffusion of Ag in S-rich Ge ³⁰ S amorphous films. Thin Solid Films, 2004, 449, 248-253.	0.8	59
11	Nonvolatile memory based on solid electrolytes. , 0, , .		54
12	Programmable metallization cell memory based on Ag-Ge-S and Cu-Ge-S solid electrolytes. , 0, , .		50
13	Local structure resulting from photo and thermal diffusion of Ag in Ge ³⁰ Se ⁷⁰ thin films. Journal of Non-Crystalline Solids, 2004, 338-340, 552-556.	1.5	49
14	In Situ Measurements of X-Ray-Induced Silver Diffusion into a Ge ₃₀ Se ₇₀ Thin Film. Journal of the American Ceramic Society, 2008, 91, 760-765.	1.9	49
15	Silver transport in Ge _x Se _{1-x} :Ag materials: Ab initio simulation of a solid electrolyte. Physical Review B, 2005, 72, .	1.1	47
16	Polarization-dependent, laser-induced anisotropic photocrystallization of some amorphous chalcogenide films. Applied Physics Letters, 1997, 71, 2118-2120.	1.5	43
17	Crystallization effects in annealed thin Ge ³⁰ Se ⁷⁰ films photodiffused with Ag. Journal of Non-Crystalline Solids, 2006, 352, 1986-1990.	1.5	42
18	Sheet Resistance Measurement of Non-Standard Cleanroom Materials Using Suspended Greek Cross Test Structures. IEEE Transactions on Semiconductor Manufacturing, 2006, 19, 2-9.	1.4	41

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19	Macroscopic phase separation of Se-rich ($x < 1/3$) ternary $\text{Ag}_y(\text{Ge}_x\text{Se}_{1-x})_1$ glasses. <i>Journal of Physics Condensed Matter</i> , 2003, 15, S1573-S1584.	0.7	37
20	Microscopic origin of the glass forming tendency in chalcogenides and constraint theory. <i>Journal of Non-Crystalline Solids</i> , 1998, 240, 1-21.	1.5	35
21	Structural development in Ge-rich $\text{Ge}-\text{S}$ glasses. <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 1792-1796.	1.5	35
22	Total-Ionizing-Dose Effects on the Resistance Switching Characteristics of Chalcogenide Programmable Metallization Cells. <i>IEEE Transactions on Nuclear Science</i> , 2013, 60, 4563-4569.	1.2	34
23	Structural details of Ge-rich and silver-doped chalcogenide glasses for nanoionic nonvolatile memory. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 621-626.	0.8	30
24	Ag-photodoping in Ge-chalcogenide amorphous thin films—Reaction products and their characterization. <i>Journal of Physics and Chemistry of Solids</i> , 2007, 68, 866-872.	1.9	29
25	Ionizing Radiation Effects on Nonvolatile Memory Properties of Programmable Metallization Cells. <i>IEEE Transactions on Nuclear Science</i> , 2014, 61, 2985-2990.	1.2	29
26	Structure of copper-doped tungsten oxide films for solid-state memory. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 1844-1848.	1.5	24
27	Crystallization effects in annealed thin GeS_2 films photodiffused with Ag. <i>Journal of Non-Crystalline Solids</i> , 2007, 353, 1454-1459.	1.5	23
28	Evolution of chemical structure during silver photodiffusion into chalcogenide glass thin films. <i>Journal of Non-Crystalline Solids</i> , 2009, 355, 1924-1929.	1.5	23
29	Static impedance behavior of programmable metallization cells. <i>Solid-State Electronics</i> , 2015, 106, 27-33.	0.8	22
30	Effects of Cobalt-60 Gamma-Rays on Ge-Se Chalcogenide Glasses and Ag/Ge-Se Test Structures. <i>IEEE Transactions on Nuclear Science</i> , 2012, 59, 3093-3100.	1.2	19
31	Sensors Based on Radiation-Induced Diffusion of Silver in Germanium Selenide Glasses. <i>IEEE Transactions on Nuclear Science</i> , 2013, 60, 4257-4264.	1.2	19
32	Flow regulation in microchannels via electrical alteration of surface properties. <i>Superlattices and Microstructures</i> , 2003, 34, 467-473.	1.4	18
33	Laser-induced polarization-dependent photocrystallization of amorphous chalcogenide films. <i>Journal of Non-Crystalline Solids</i> , 1998, 227-230, 739-742.	1.5	17
34	Glass formation in the $\text{Ge}-\text{Se}-\text{Ag}$ ternary. <i>Journal of Non-Crystalline Solids</i> , 2000, 266-269, 867-871.	1.5	16
35	Gamma radiation induced effects in floppy and rigid Ge-containing chalcogenide thin films. <i>Journal of Applied Physics</i> , 2014, 115, 043502.	1.1	16
36	Polarization-dependent laser crystallization of Se-containing amorphous chalcogenide films. <i>Applied Surface Science</i> , 2000, 154-155, 135-139.	3.1	15

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37	New functionality of chalcogenide glasses for radiation sensing of nuclear wastes. Journal of Hazardous Materials, 2014, 269, 68-73.	6.5	15
38	Radiation Hardening by Process of CBRAM Resistance Switching Cells. IEEE Transactions on Nuclear Science, 2016, 63, 2145-2151.	1.2	15
39	Structural transformation in $\text{Ge}_{1-x}\text{S}_x$ films. Physical Review Materials, 2019, 3, .	0.9	15
40	Germanium sulfide-based solid electrolytes for non-volatile memory. , 2005, , .		14
41	A Low Power Non-Volatile Memory Element Based on Copper in Deposited Silicon Oxide. , 2006, , .		14
42	Oxygen-assisted photoinduced structural transformation in amorphous $\text{Ge}_{1-x}\text{S}_x$ films. Physica Status Solidi (B): Basic Research, 2009, 246, 1813-1819.	0.7	14
43	Studies of silver photodiffusion dynamics in $\text{Ag}/\text{Ge}_{1-x}\text{S}_x$ ($x = 0.2$ and 0.4) films using neutron reflectometry. Canadian Journal of Physics, 2014, 92, 654-658.	0.4	13
44	Selective solubility of some silver-chalcogenide glasses. Journal of Non-Crystalline Solids, 1987, 90, 589-592.	1.5	12
45	Photoinduced changes by polarisation holographic recording in $\text{Se}_{70}\text{Ag}_{15}\text{I}_{15}$ thin films. Journal of Non-Crystalline Solids, 1993, 164-166, 1203-1206.	1.5	12
46	Heterogeneity of molecular structure of Ag photo-diffused $\text{Ge}_{30}\text{Se}_{70}$ thin films. Journal of Non-Crystalline Solids, 2008, 354, 2719-2723.	1.5	12
47	Dynamic variations of the light-induced effects in $\text{a-Ge}_x\text{Se}_{100-x}$ films: experiment and simulation. Optical Materials Express, 2015, 5, 295.	1.6	12
48	Introduction of Chalcogenide Glasses to Additive Manufacturing: Nanoparticle Ink Formulation, Inkjet Printing, and Phase Change Devices Fabrication. Scientific Reports, 2021, 11, 14311.	1.6	12
49	Flexible Sensors Based on Radiation-Induced Diffusion of Ag in Chalcogenide Glass. IEEE Transactions on Nuclear Science, 2014, 61, 3432-3437.	1.2	11
50	Glass formation in the $\text{Se}-\text{Ag}-\text{I}$ system. Materials Chemistry and Physics, 1991, 30, 55-59.	2.0	10
51	Nanostructure of solid electrolytes and surface electrodeposits. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 19, 161-166.	1.3	10
52	Gamma ray induced structural effects in bare and Ag doped $\text{Ge}_{1-x}\text{S}_x$ thin films for sensor application. Journal of Non-Crystalline Solids, 2013, 377, 195-199.	1.5	10
53	Structural investigations of the $\text{Se}-\text{Ag}-\text{I}$ system. Journal of Non-Crystalline Solids, 2003, 326-327, 125-129.	1.5	9
54	Direct ab initio simulation of silver ion dynamics in chalcogenide glasses. Physica Status Solidi (B): Basic Research, 2005, 242, R55-R57.	0.7	9

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55	Study of the sorption properties of Ge ₂₀ Se ₈₀ thin films for NO ₂ gas sensing. <i>Thin Solid Films</i> , 2012, 525, 141-147.	0.8	9
56	Silver photo-diffusion and photo-induced macroscopic surface deformation of Ge ₃₃ Se ₆₇ /Ag/Si substrate. <i>Journal of Applied Physics</i> , 2016, 120, .	1.1	9
57	Phase change in Ge-Se chalcogenide glasses and its implications on optical temperature-sensing devices. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 11211-11226.	1.1	9
58	Kinetics of vacuum sublimation and condensation of films from the Se-Ag-I system. <i>Thin Solid Films</i> , 1991, 205, 25-28.	0.8	8
59	Silver photodiffusion into Ge-rich amorphous germanium sulfide neutron reflectivity study. <i>Journal of Applied Physics</i> , 2017, 122, 235105.	1.1	8
60	Effect of Ion Irradiation on Amorphous and Crystalline Ge-Se and Their Application as Phase Change Temperature Sensor. <i>Physica Status Solidi (B): Basic Research</i> , 2021, 258, 2000429.	0.7	8
61	NO ₂ gas sorption studies of Ge ₃₃ Se ₆₇ films using quartz crystal microbalance. <i>Materials Chemistry and Physics</i> , 2012, 137, 552-557.	2.0	7
62	Dynamics of silver photo-diffusion into Ge-chalcogenide films: time-resolved neutron reflectometry. <i>Journal of Physics: Conference Series</i> , 2015, 619, 012046.	0.3	7
63	Processes of silver photodiffusion into Ge-chalcogenide probed by neutron reflectivity technique. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 1894-1903.	0.8	7
64	Flexible Ag-ChG Radiation Sensors: Limit of Detection and Dynamic Range Optimization Through Physical Design Tuning. <i>IEEE Transactions on Nuclear Science</i> , 2016, 63, 2137-2144.	1.2	7
65	CBRAM devices based on a nanotube chalcogenide glass structure. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 2389-2402.	1.1	7
66	Chalcogenide Glass-Capped Fiber-Optic Sensor for Real-Time Temperature Monitoring in Extreme Environments. <i>Sensors</i> , 2021, 21, 1616.	2.1	7
67	TID Impact on Process Modified CBRAM Cells. , 2015, , .		6
68	Trap distribution in amorphous Ge-Se-Ga thin films. <i>Thin Solid Films</i> , 1981, 84, L177-L179.	0.8	5
69	Photothermal recording in thin films of Se-Te-Ag glasses. <i>Journal of Non-Crystalline Solids</i> , 1991, 137-138, 1013-1016.	1.5	5
70	Photoinduced changes in the selenium-silver-iodine system. <i>The Journal of Physical Chemistry</i> , 1992, 96, 8998-9001.	2.9	5
71	Class-forming region and some properties of the glasses from the Te-Ag-I system. <i>Materials Chemistry and Physics</i> , 1993, 33, 233-238.	2.0	5
72	Photoinduced changes in the optical constants of Ge-Se-AgI thin films. <i>Optical Materials</i> , 2000, 13, 389-396.	1.7	5

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73	A non-volatile memory array based on nano-ionic Conductive Bridge Memristors. , 2011, , .		5
74	Thin Ge-Se films as a sensing material for radiation doses. Physica Status Solidi (B): Basic Research, 2014, 251, 1347-1353.	0.7	5
75	Measurement of Transient Photo-Induced Changes in Thin Films at J-PARCâ€”â€”Time-Resolved Neutron Reflectivity Measurements of Silver Photo-Diffusion into Ge-Chalcogenide Films. , 2015, , .		5
76	Optimization of Flexible Ag-Chalcogenide Glass Sensors for Radiation Detection. , 2015, , .		5
77	Effects of 14 MeV neutron irradiation on the DC characteristics of CBRAM cells. , 2016, , .		5
78	Xâ€”ray radiation induced effects in selected chalcogenide glasses and CBRAM devices based on them. Physica Status Solidi (B): Basic Research, 2016, 253, 1060-1068.	0.7	5
79	Kinetics of Silver Photodiffusion Into Amorphous Ge₂₀S₈₀ Films: Case of Preâ€”Reaction. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1800049.	0.8	5
80	First electrophilic substitution of 4-methoxyindole with triethyl orthoformate as an a1-synthon. Monatshefte FÃ¼r Chemie, 1990, 121, 77-80.	0.9	4
81	Holographic investigations of photoinduced changes in PECVD Geâ€”Se thin films. Vacuum, 1996, 47, 1211-1213.	1.6	4
82	Integration of a novel electrochemical tuning scheme with mems surface micromachined resonators. , 0, , .		4
83	Structural study of Ag-Ge-S solid electrolyte glass system for resistive radiation sensing. , 2011, , .		4
84	Simulation and process flow of radiation sensors based on chalcogenide glasses for in situ measurement capability. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 2415-2419.	0.8	4
85	Structural and Material Changes in Thin Film Chalcogenide Glasses Under Ar-Ion Irradiation. IEEE Transactions on Nuclear Science, 2014, 61, 2855-2861.	1.2	4
86	Electron beam effects in Geâ€”Se thin films and resistance change memory devices. Emerging Materials Research, 2016, 5, 126-134.	0.4	4
87	Proton Beam Effects on Geâ€”Se/Ag Thin Films. Physica Status Solidi (B): Basic Research, 2018, 255, 1700453.	0.7	4
88	Applications of Non-Crystalline Materials â€” C. REAL TIME OPTICAL RECORDING ON THIN FILMS OF AMORPHOUS SEMICONDUCTORS. Series on Directions in Condensed Matter Physics, 2000, , 813-843.	0.1	4
89	Three-component chalcogenide glasses as inorganic photoresists. Thin Solid Films, 1989, 182, 247-254.	0.8	3
90	Photoinduced Chemical Changes in Vacuum-deposited Amorphous Ge-Se-Tl Films. Proceedings of SPIE, 1990, , .	0.8	3

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91	Glass formation in the Se-Ag-Br and Se-Ag-Cl systems. <i>Materials Letters</i> , 1994, 20, 195-201.	1.3	3
92	Optical band-gap and activation energy of thin films from the Se-Ag-I and Te-Ag-I systems. <i>Radiation Effects and Defects in Solids</i> , 1995, 137, 183-186.	0.4	3
93	Kinetics of silver photodiffusion into amorphous S-rich germanium sulphide – neutron and optical reflectivity. <i>Pure and Applied Chemistry</i> , 2019, 91, 1821-1835.	0.9	3
94	Silver photodiffusion into amorphous Ge chalcogenides. <i>EPJ Applied Physics</i> , 2020, 90, 30101.	0.3	3
95	Suspended Greek cross test structures for measuring the sheet resistance of non-standard cleanroom materials. , 0, , .		2
96	Photolithography-free Ge–Se based memristive arrays; materials characterization and device testing. <i>Canadian Journal of Physics</i> , 2014, 92, 623-628.	0.4	2
97	Ion beam effect on Ge-Se chalcogenide glass films: Non-volatile memory array formation, structural changes and device performance. , 2014, , .		2
98	Materials Characterization of Thin Films Printed with Ge ₂₀ Se ₈₀ Ink. <i>Microscopy and Microanalysis</i> , 2019, 25, 2606-2607.	0.2	2
99	Nanotube structures: material characterization and structural analysis of Ge–Se thin films. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 2470-2478.	1.1	2
100	Temperature dependence of polarization holographic recording in thin films of Se ₇₀ Ag ₁₅ I ₁₅ . <i>Thin Solid Films</i> , 1993, 226, 119-122.	0.8	1
101	Ag-chalcogenide glass flexible radiation sensor: Impact of atomic ratio of Se on the TID influenced lateral diffusion of Ag. , 2016, , .		1
102	Kinetics of Silver Photodiffusion Into Amorphous Ge ₂₀ S ₈₀ Films: Case of Pre-Reaction (Phys. Status) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 0.8		1
103	Studies and Analysis of GexSe _{100-x} Based Spin Coated Chalcogenide Thin Films. <i>Microscopy and Microanalysis</i> , 2019, 25, 2608-2609.	0.2	1
104	Excitation Light Energy Dependence of Silver Photodiffusion into Amorphous Germanium Sulfide: Neutron and X-Ray Reflectivity and X-Ray Diffraction. <i>Physica Status Solidi (B): Basic Research</i> , 2020, 257, 2000178.	0.7	1
105	Low-Cost Test And Characterization Platform For Memristors. , 2021, , .		1
106	Drift mobility in Ge-Se-Ga glasses. <i>Journal of Non-Crystalline Solids</i> , 1987, 90, 433-436.	1.5	0
107	Effective electron mass in thin films of the Ge-Se-Ga system. <i>Thin Solid Films</i> , 1989, 169, 169-172.	0.8	0
108	Photothermal Recording in Thin Films of Se-Te-Ag Glasses. <i>Proceedings of SPIE</i> , 1990, , .	0.8	0

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109	Influence of an electrical field on optical recording in chalco-halide glasses. Journal of Non-Crystalline Solids, 1998, 227-230, 748-751.	1.5	0
110	PECVD of Ge _x S _{1-x} films for nano-ionic redox conductive bridge memristive switch memory. , 2013, , .		0
111	Low-current sensing circuit and topology for portable gamma radiation sensor. , 2014, , .		0
112	A Comparative Study on TID Influenced Lateral Diffusion of Group 11 Metals into Ge _x S _{1-x} and Ge _x Se _{1-x} Systems: A Flexible Radiation Sensor Development Perspective. IEEE Transactions on Nuclear Science, 2017, , 1-1.	1.2	0
113	Synthesis, Structure and Some Modes of Application of New Chalcogenide and Chalco-Halide Glasses of Silver. , 1997, , 71-82.		0
114	E-Beam Induced Effects in Ge-Se Based Redox Conductive Bridge Memory Devices and Thin Films. , 2015, , 567-574.		0