Matthias Wuttig

List of Publications by Year
in descending order

424 papers	31,912 citations	4641 85 h-index	5519 163 g-index
445 all docs	445 docs citations	445 times ranked	16938 citing authors

#	Article	IF	Citations
1	Halide Perovskites: Advanced Photovoltaic Materials Empowered by a Unique Bonding Mechanism. Advanced Functional Materials, 2022, 32, 2110166.	7.8	35
2	Thermally Controlled Chargeâ€Carrier Transitions in Disordered PbSbTe Chalcogenides. Advanced Materials, 2022, 34, e2106868.	11.1	5
3	Tailoring Crystallization Kinetics of Chalcogenides for Photonic Applications. Advanced Electronic Materials, 2022, 8, 2100974.	2.6	10
4	The glass transition of water, insight from phase change materials. Journal of Non-Crystalline Solids: X, 2022, 14, 100084.	0.5	5
5	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency. Nature Communications, 2022, 13, 1696.	5.8	125
6	Two-Dimensional Platinum Diselenide Waveguide-Integrated Infrared Photodetectors. ACS Photonics, 2022, 9, 859-867.	3.2	14
7	Nanostructured In₃SbTe₂ antennas enable switching from sharp dielectric to broad plasmonic resonances. Nanophotonics, 2022, 11, 3871-3882.	2.9	14
8	Fragileâ€toâ€Strong Transition in Phaseâ€Change Material Ge₃Sb₆Te₅. Advanced Functional Materials, 2022, 32, .	7.8	16
9	Reconfiguring Magnetic Infrared Resonances with the Plasmonic Phase-Change Material In₃SbTe₂. ACS Photonics, 2022, 9, 1821-1828.	3.2	11
10	Scaling and Confinement in Ultrathin Chalcogenide Films as Exemplified by GeTe. Small, 2022, 18, e2201753.	5.2	13
11	NEUROTEC I: Neuro-inspired Artificial Intelligence Technologies for the Electronics of the Future. , 2022, , .		0
12	Dynamic doping and Cottrell atmosphere optimize the thermoelectric performance of n-type PbTe over a broad temperature interval. Nano Energy, 2022, 101, 107576.	8.2	16
13	Acceleration of Crystallization Kinetics in Geâ€Sbâ€Teâ€Based Phaseâ€Change Materials by Substitution of Ge by Sn. Advanced Functional Materials, 2021, 31, 2004803.	7.8	5
14	Enhancing thermoelectric performance of Sb2Te3 through swapped bilayer defects. Nano Energy, 2021, 79, 105484.	8.2	32
15	Metavalent Bonding in Solids: Characteristic Representatives, Their Properties, and Design Options. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000482.	1.2	28
16	Approaching the Glass Transition Temperature of GeTe by Crystallizing Ge₁₅Te₈₅. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000478.	1.2	12
17	In3SbTe2 as a programmable nanophotonics material platform for the infrared. Nature Communications, 2021, 12, 924.	5.8	57
18	Effects of Different Amounts of Nb Doping on Electrical, Optical and Structural Properties in Sputtered TiO2â^'x Films. Crystals, 2021, 11, 301.	1.0	7

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19	Nbâ€Mediated Grain Growth and Grainâ€Boundary Engineering in Mg₃Sb₂â€Based Thermoelectric Materials. Advanced Functional Materials, 2021, 31, 2100258.	7.8	53
20	Combining Switchable Phaseâ€Change Materials and Phaseâ€Transition Materials for Thermally Regulated Smart Midâ€Infrared Modulators. Advanced Optical Materials, 2021, 9, 2100417.	3.6	20
21	Programmable Huygensâ€™ metasurfaces for active optical phase control. , 2021, , .		1
22	Boron Strengthened GeTeâ€Based Alloys for Robust Thermoelectric Devices with High Output Power Density. Advanced Energy Materials, 2021, 11, 2102012.	10.2	39
23	Metavalent Bonding in Crystalline Solids: How Does It Collapse?. Advanced Materials, 2021, 33, e2102356.	11.1	65
24	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. Nature Materials, 2021, 20, 1378-1384.	13.3	340
25	The potential of chemical bonding to design crystallization and vitrification kinetics. Nature Communications, 2021, 12, 4978.	5.8	35
26	Superconducting Phase Induced by a Local Structure Transition in Amorphous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Sb</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mm under High Pressure. Physical Review Letters, 2021, 127, 127002.	2.9	13
27	Disorder-induced Anderson-like localization for bidimensional thermoelectrics optimization. Matter, 2021, 4, 2970-2984.	5.0	15
28	Boronâ€Mediated Grain Boundary Engineering Enables Simultaneous Improvement of Thermoelectric and Mechanical Properties in Nâ€Type Bi₂Te₃. Small, 2021, 17, e2104067.	5.2	30
29	How to Identify Lone Pairs, Van der Waals Gaps, and Metavalent Bonding Using Charge and Pair Density Methods: From Elemental Chalcogens to Lead Chalcogenides and Phaseâ€Change Materials. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000534.	1.2	19
30	Ultraâ€Thin Switchable Absorbers Based on Lossy Phaseâ€Change Materials. Advanced Optical Materials, 2021, 9, 2101118.	3.6	19
31	Thermodynamics and kinetics of glassy and liquid phase-change materials. Materials Science in Semiconductor Processing, 2021, 135, 106094.	1.9	7
32	Glass transition of the phase change material AIST and its impact on crystallization. Materials Science in Semiconductor Processing, 2021, 134, 105990.	1.9	10
33	Materials Screening for Disorderâ€Controlled Chalcogenide Crystals for Phaseâ€Change Memory Applications. Advanced Materials, 2021, 33, e2006221.	11.1	32
34	Retarding Ostwald ripening through Gibbs adsorption and interfacial complexions leads to high-performance SnTe thermoelectrics. Energy and Environmental Science, 2021, 14, 5469-5479.	15.6	67
35	Far-Infrared Near-Field Optical Imaging and Kelvin Probe Force Microscopy of Laser-Crystallized and -Amorphized Phase Change Material Ge₃Sb₂Te₆. Nano Letters, 2021, 21, 9012-9020.	4.5	12
36	Surface Polaritonâ€Like sâ€Polarized Waveguide Modes in Switchable Dielectric Thin Films on Polar Crystals. Advanced Optical Materials, 2020, 8, 1901056.	3.6	16

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37	Chalcogenide Thermoelectrics Empowered by an Unconventional Bonding Mechanism. Advanced Functional Materials, 2020, 30, 1904862.	7.8	148
38	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. Materials Today, 2020, 32, 260-274.	8.3	73
39	Disordering process of GeSb₂Te₄ induced by ion irradiation. Journal Physics D: Applied Physics, 2020, 53, 134001.	1.3	1
40	Control of effective cooling rate upon magnetron sputter deposition of glassy Ge15Te85. Scripta Materialia, 2020, 178, 223-226.	2.6	12
41	Investigating Bond Rupture in Resonantly Bonded Solids by Field Evaporation of Carbon Nanotubes. Nano Letters, 2020, 20, 116-121.	4.5	15
42	Cu Intercalation and Br Doping to Thermoelectric SnSe₂ Lead to Ultrahigh Electron Mobility and Temperatureâ€Independent Power Factor. Advanced Functional Materials, 2020, 30, 1908405.	7.8	53
43	Lead Chalcogenides: Discovering Electronâ€Transferâ€Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where X = Te, Se, S, O) (Adv. Mater. 49/2020). Advanced Materials, 2020, 32, 2070370.	11.1	1
44	Exceptionally High Average Power Factor and Thermoelectric Figure of Merit in n-type PbSe by the Dual Incorporation of Cu and Te. Journal of the American Chemical Society, 2020, 142, 15172-15186.	6.6	72
45	Discovering Electronâ€Transferâ€Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where) Tj ETQq1 1 0.784314 rgBT /(	11.1	56
46	Huygens' Metasurfaces: Allâ€Dielectric Programmable Huygens' Metasurfaces (Adv. Funct. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	7.8	3
47	Violation of the Stokesâ€"Einstein relation in Ge2Sb2Te5, GeTe, Ag4In3Sb67Te26, and Ge15Sb85, and its connection to fast crystallization. Acta Materialia, 2020, 195, 491-500.	3.8	19
48	Changes of Structure and Bonding with Thickness in Chalcogenide Thin Films. Advanced Materials, 2020, 32, e2001033.	11.1	19
49	Chalcogenides by Design: Functionality through Metavalent Bonding and Confinement. Advanced Materials, 2020, 32, e1908302.	11.1	179
50	The interplay between Peierls distortions and metavalent bonding in IVâ€"VI compounds: comparing GeTe with related monochalcogenides. Journal Physics D: Applied Physics, 2020, 53, 234002.	1.3	43
51	Allâ€Dielectric Programmable Huygens' Metasurfaces. Advanced Functional Materials, 2020, 30, 1910259.	7.8	149
52	Employing Interfaces with Metavalently Bonded Materials for Phonon Scattering and Control of the Thermal Conductivity in TAGSâ€<i>x</i> Thermoelectric Materials. Advanced Functional Materials, 2020, 30, 1910039.	7.8	35
53	In situ study of vacancy disordering in crystalline phase-change materials under electron beam irradiation. Acta Materialia, 2020, 187, 103-111.	3.8	27
54	Uncovering Î²-relaxations in amorphous phase-change materials. Science Advances, 2020, 6, eaay6726.	4.7	33

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55	Direct atomic insight into the role of dopants in phase-change materials. Nature Communications, 2019, 10, 3525.	5.8	56
56	Switching between Crystallization from the Glassy and the Undercooled Liquid Phase in Phase Change Material Ge₂Sb₂Te₅. Advanced Materials, 2019, 31, e1900784.	11.1	64
57	Layerâ€Switching Mechanisms in Sb₂Te₃. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900320.	1.2	20
58	Impact of Bonding on the Stacking Defects in Layered Chalcogenides. Advanced Functional Materials, 2019, 29, 1902332.	7.8	21
59	Understanding the Structure and Properties of Sesquiâ€Chalcogenides (i.e.,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 587 Td (V	11.1	98
60	Phase-change materials: Empowered by an unconventional bonding mechanism. MRS Bulletin, 2019, 44, 699-704.	1.7	15
61	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO_x thin film with <i>x</i> âˆ¼ 1. Nanoscale, 2019, 11, 16978-16990.	2.8	16
62	Polariton nanophotonics using phase-change materials. Nature Communications, 2019, 10, 4487.	5.8	106
63	Advanced Optical Programming of Individual Metaâ€Atoms Beyond the Effective Medium Approach. Advanced Materials, 2019, 31, e1901033.	11.1	47
64	Quantification of Carrier Density Gradients along Axially Doped Silicon Nanowires Using Infrared Nanoscopy. ACS Photonics, 2019, 6, 1744-1754.	3.2	25
65	Femtosecond x-ray diffraction reveals a liquidâ€"liquid phase transition in phase-change materials. Science, 2019, 364, 1062-1067.	6.0	120
66	Mg Deficiency in Grain Boundaries of nâ€Type Mg₃Sb₂ Identified by Atom Probe Tomography. Advanced Materials Interfaces, 2019, 6, 1900429.	1.9	44
67	Phase Change Materials and Superlattices for Nonâ€Volatile Memories. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900130.	1.2	23
68	Highly Confined and Switchable Mid-Infrared Surface Phonon Polariton Resonances of Planar Circular Cavities with a Phase Change Material. Nano Letters, 2019, 19, 2549-2554.	4.5	43
69	Stoichiometry Determination of Chalcogenide Superlattices by Means of Xâ€Ray Diffraction and its Limits. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800577.	1.2	9
70	Role of grain boundaries in Geâ€"Sbâ€"Te based chalcogenide superlattices. Journal of Physics Condensed Matter, 2019, 31, 204002.	0.7	11
71	Exploring ultrafast threshold switching in In3SbTe2 phase change memory devices. Scientific Reports, 2019, 9, 19251.	1.6	28
72	Persistence of spin memory in a crystalline, insulating phase-change material. Npj Quantum Materials, 2019, 4, .	1.8	13

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73	A Quantumâ€Mechanical Map for Bonding and Properties in Solids. Advanced Materials, 2019, 31, e1806280.	11.1	206
74	Disorder Control in Crystalline GeSb 2 Te 4 and its Impact on Characteristic Length Scales. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800578.	1.2	8
75	Designing crystallization in phase-change materials for universal memory and neuro-inspired computing. Nature Reviews Materials, 2019, 4, 150-168.	23.3	572
76	Metal-like conductivity in undoped TiO2-x: Understanding an unconventional transparent conducting oxide. Thin Solid Films, 2019, 669, 1-7.	0.8	10
77	Investigation of the phase change mechanism of Ge6Sn2Sb2Te11. Acta Materialia, 2018, 152, 278-287.	3.8	15
78	Unique Bond Breaking in Crystalline Phase Change Materials and the Quest for Metavalent Bonding. Advanced Materials, 2018, 30, e1706735.	11.1	175
79	Evidence of Enhanced Carrier Collection in Cu(In,Ga)Se₂ Grain Boundaries: Correlation with Microstructure. ACS Applied Materials & Interfaces, 2018, 10, 14759-14766.	4.0	26
80	2D or Not 2D: Strain Tuning in Weakly Coupled Heterostructures. Advanced Functional Materials, 2018, 28, 1705901.	7.8	49
81	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. ACS Applied Materials & Interfaces, 2018, 10, 3609-3615.	4.0	74
82	Unconventional two-dimensional germanium dichalcogenides. Nanoscale, 2018, 10, 7363-7368.	2.8	26
83	Probing hyperbolic polaritons using infrared attenuated total reflectance micro-spectroscopy. MRS Communications, 2018, 8, 1418-1425.	0.8	17
84	Sb₂Te₃ Growth Study Reveals That Formation of Nanoscale Charge Carrier Domains Is an Intrinsic Feature Relevant for Electronic Applications. ACS Applied Nano Materials, 2018, 1, 6834-6842.	2.4	11
85	Surface Modifications by Self-Assembled Monolayers to Improve Organic Opto-Electronic Devices. , 2018, , 835-841.		1
86	Vibrational Properties of Ge-Sb-Te Phase-Change Alloys Studied by Temperature-Dependent IR and Raman Spectroscopy. NATO Science for Peace and Security Series B: Physics and Biophysics, 2018, , 377-379.	0.2	0
87	Atomic disordering processes in crystalline GeTe induced by ion irradiation. Journal Physics D: Applied Physics, 2018, 51, 495103.	1.3	5
88	Vibrational Properties of Ge-Sb-Te Phase-Change Alloys Studied by IR and Raman Spectroscopy at Different Temperatures. NATO Science for Peace and Security Series B: Physics and Biophysics, 2018, , 441-441.	0.2	0
89	Tailoring Thermoelectric Transport Properties of Ag-Alloyed PbTe: Effects of Microstructure Evolution. ACS Applied Materials & Interfaces, 2018, 10, 38994-39001.	4.0	17
90	Incipient Metals: Functional Materials with a Unique Bonding Mechanism. Advanced Materials, 2018, 30, e1803777.	11.1	255

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91	High-Performance n-Type PbSeâ€“Cu₂Se Thermoelectrics through Conduction Band Engineering and Phonon Softening. Journal of the American Chemical Society, 2018, 140, 15535-15545.	6.6	103
92	Correlation between the transport mechanisms in conductive filaments inside Ta2O5-based resistive switching devices and in substoichiometric TaOx thin films. Applied Physics Letters, 2018, 112, .	1.5	19
93	Thermoelectric Performance of IVâ€“VI Compounds with Octahedralâ€Like Coordination: A Chemicalâ€Bonding Perspective. Advanced Materials, 2018, 30, e1801787.	11.1	78
94	Genesis and Effects of Swapping Bilayers in Hexagonal GeSb₂Te₄. Chemistry of Materials, 2018, 30, 4770-4777.	3.2	36
95	Controlled Crystal Growth of Indium Selenide, In₂Se₃, and the Crystal Structures of Î±-In₂Se₃. Inorganic Chemistry, 2018, 57, 11775-11781.	1.9	97
96	Indiumâ€Tinâ€Oxide (ITO) Work Function Tailoring by Covalently Bound Carboxylic Acid Selfâ€Assembled Monolayers. Physica Status Solidi (B): Basic Research, 2018, 255, 1800075.	0.7	18
97	Phase formation and stability in TiO_{<i>x</i>} and ZrO_{<i>x</i>} thin films: Extremely sub-stoichiometric functional oxides for electrical and TCO applications. Zeitschrift Fur Kristallographie - Crystalline Materials, 2017, 232, 161-183.	0.4	4
98	Unerwartete Geâ€Geâ€Kontakte in der zweidimensionalen Phase Ge₄Se₃Te und Analyse ihres chemischen Ursprungs mittels Energiedichte(DOE)â€Funktion. Angewandte Chemie, 2017, 129, 10338-10342.	1.6	2
99	Unexpected Geâ€“Ge Contacts in the Twoâ€Dimensional Ge₄Se₃Te Phase and Analysis of Their Chemical Cause with the Density of Energy (DOE) Function. Angewandte Chemie - International Edition, 2017, 56, 10204-10208.	7.2	64
100	Simultaneous optimization of electrical and thermal transport properties of Bi0.5Sb1.5Te3 thermoelectric alloy by twin boundary engineering. Nano Energy, 2017, 37, 203-213.	8.2	164
101	Enhanced temperature stability and exceptionally high electrical contrast of selenium substituted Ge₂Sb₂Te₅ phase change materials. RSC Advances, 2017, 7, 17164-17172.	1.7	26
102	Role of Nanostructuring and Microstructuring in Silver Antimony Telluride Compounds for Thermoelectric Applications. ACS Applied Materials & Interfaces, 2017, 9, 14779-14790.	4.0	28
103	Dielectric properties of amorphous phase-change materials. Physical Review B, 2017, 95, .	1.1	41
104	Impact of Pressure on the Resonant Bonding in Chalcogenides. Journal of Physical Chemistry C, 2017, 121, 25447-25454.	1.5	25
105	Investigating the Influence of Resonant Bonding on the Optical Properties of Phase Change Materials (GeTe)_{<i>x</i>}SnSb₂Se₄. Chemistry of Materials, 2017, 29, 9320-9327.	3.2	18
106	Design Parameters for Phaseâ€Change Materials for Nanostructure Resonance Tuning. Advanced Optical Materials, 2017, 5, 1700261.	3.6	55
107	Chemical Tuning of Carrier Type and Concentration in a Homologous Series of Crystalline Chalcogenides. Chemistry of Materials, 2017, 29, 6749-6757.	3.2	18
108	InnenrÃ¼cktitelbild: Unerwartete Geâ€Geâ€Kontakte in der zweidimensionalen Phase Ge₄Se₃Te und Analyse ihres chemischen Ursprungs mittels Energiedichte(DOE)â€Funktion (Angew. Chem. 34/2017). Angewandte Chemie, 2017, 129, 10381-10381.	1.6	0

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109	Beam switching and bifocal zoom lensing using active plasmonic metasurfaces. Light: Science and Applications, 2017, 6, e17016-e17016.	7.7	313
110	Phase-change materials for non-volatile photonic applications. Nature Photonics, 2017, 11, 465-476.	15.6	917
111	Formation of resonant bonding during growth of ultrathin GeTe films. NPG Asia Materials, 2017, 9, e396-e396.	3.8	25
112	A Review on Disorder-Driven Metalâ€"Insulator Transition in Crystalline Vacancy-Rich GeSbTe Phase-Change Materials. Materials, 2017, 10, 862.	1.3	54
113	Strain Development and Damage Accumulation Under Ion Irradiation of Polycrystalline Geâ€"Sbâ€"Te Alloys. Nanoscience and Nanotechnology Letters, 2017, 9, 1095-1101.	0.4	4
114	Phase Change Data Storage: New Materials â˜†. , 2017, , .		0
115	Carbon-Based Resistive Memories. , 2016, , .		6
116	Element-resolved atomic structure imaging of rocksalt Ge2Sb2Te5 phase-change material. Applied Physics Letters, 2016, 108, .	1.5	89
117	Atomic stacking and van-der-Waals bonding in GeTeâ€"Sb₂Te₃ superlattices. Journal of Materials Research, 2016, 31, 3115-3124.	1.2	53
118	Reversible optical switching of highly confined phononâ€"polaritons with an ultrathin phase-changeÂmaterial. Nature Materials, 2016, 15, 870-875.	13.3	330
119	Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials. Physical Review Letters, 2016, 117, 067601.	2.9	59
120	Dithiocarbamate Self-Assembled Monolayers as Efficient Surface Modifiers for Low Work Function Noble Metals. Langmuir, 2016, 32, 8812-8817.	1.6	13
121	Interband characterization and electronic transport control of nanoscaled<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mrow><mml:mi>GeTe</mml:mi><mml:mo>/< Physical Review B, 2016, 94, .	1.1	9
122	Ordered Peierls distortion prevented at growth onset of GeTe ultra-thin films. Scientific Reports, 2016, 6, 32895.	1.6	20
123	Revisiting the Local Structure in Ge-Sb-Te based Chalcogenide Superlattices. Scientific Reports, 2016, 6, 22353.	1.6	63
124	Density-functional theory guided advances in phase-change materials and memories. MRS Bulletin, 2015, 40, 856-869.	1.7	57
125	Disorderâ€Induced Localization in Crystalline Pseudoâ€Binary GeTeâ€"Sb₂Te₃ Alloys between Ge₃Sb₂Te₆ and GeTe. Advanced Functional Materials, 2015, 25, 6399-6406.	7.8	58
126	Lowâ€Temperature Transport in Crystalline Ge₁Sb₂Te₄. Advanced Functional Materials, 2015, 25, 6390-6398.	7.8	42

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127	Relation between bandgap and resistance drift in amorphous phase change materials. Scientific Reports, 2015, 5, 17362.	1.6	45
128	Imaging of phase change materials below a capping layer using correlative infrared near-field microscopy and electron microscopy. Applied Physics Letters, 2015, 107, .	1.5	18
129	Effects of stoichiometry on the transport properties of crystalline phase-change materials. Scientific Reports, 2015, 5, 13496.	1.6	30
130	A Switchable Midâ€Infrared Plasmonic Perfect Absorber with Multispectral Thermal Imaging Capability. Advanced Materials, 2015, 27, 4597-4603.	11.1	487
131	Resistively Switching Chalcogenides. Advanced Functional Materials, 2015, 25, 6285-6286.	7.8	11
132	Microscopic Complexity in Phaseâ€Change Materials and its Role for Applications. Advanced Functional Materials, 2015, 25, 6343-6359.	7.8	78
133	Reversing the Resistivity Contrast in the Phaseâ€Change Memory Material GeSb₂Te₄ Using High Pressure. Advanced Electronic Materials, 2015, 1, 1500240.	2.6	19
134	Active Chiral Plasmonics. Nano Letters, 2015, 15, 4255-4260.	4.5	271
135	Disorder Control in Crystalline GeSb₂Te₄ Using High Pressure. Advanced Science, 2015, 2, 1500117.	5.6	36
136	Impact of vacancy ordering on thermal transport in crystalline phase-change materials. Reports on Progress in Physics, 2015, 78, 013001.	8.1	84
137	Understanding the conductive channel evolution in Na:WO_{3âˆ’x}-based planar devices. Nanoscale, 2015, 7, 6023-6030.	2.8	15
138	How Supercooled Liquid Phase-Change Materials Crystallize: Snapshots after Femtosecond Optical Excitation. Chemistry of Materials, 2015, 27, 5641-5646.	3.2	44
139	Vibrational properties and bonding nature of Sb₂Se₃and their implications for chalcogenide materials. Chemical Science, 2015, 6, 5255-5262.	3.7	89
140	Aging mechanisms in amorphous phase-change materials. Nature Communications, 2015, 6, 7467.	5.8	212
141	Phase-Change and Redox-Based Resistive Switching Memories. Proceedings of the IEEE, 2015, 103, 1274-1288.	16.4	142
142	Plasmonic Absorbers: A Switchable Midâ€Infrared Plasmonic Perfect Absorber with Multispectral Thermal Imaging Capability (Adv. Mater. 31/2015). Advanced Materials, 2015, 27, 4526-4526.	11.1	7
143	A chemical link between Geâ€"Sbâ€"Te and Inâ€"Sbâ€"Te phase-change materials. Journal of Materials Chemistry C, 2015, 3, 9519-9523.	2.7	44
144	Incident Angle-Tuning of Infrared Antenna Array Resonances for Molecular Sensing. ACS Photonics, 2015, 2, 1498-1504.	3.2	48

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145	Orbital mixing in solids as a descriptor for materials mapping. Solid State Communications, 2015, 203, 31-34.	0.9	16
146	Phase change materials and phase change memory. MRS Bulletin, 2014, 39, 703-710.	1.7	404
147	Phase-Change Materials for Data Storage Applications. , 2014, , 169-193.		3
148	Ion beam assisted sputter deposition of ZnO for silicon thin-film solar cells. Journal Physics D: Applied Physics, 2014, 47, 105202.	1.3	7
149	Impact of Maxwell rigidity transitions on resistance drift phenomena in GexTe1âˆ'x glasses. Applied Physics Letters, 2014, 105, .	1.5	23
150	Bonding Nature of Local Structural Motifs in Amorphous GeTe. Angewandte Chemie - International Edition, 2014, 53, 10817-10820.	7.2	125
151	Ultrafast terahertz-induced response of GeSbTe phase-change materials. Applied Physics Letters, 2014, 104, .	1.5	38
152	Increasing the carbon deposition rate using sputter yield amplification upon serial magnetron co-sputtering. Surface and Coatings Technology, 2014, 252, 74-78.	2.2	4
153	Amorphous and highly nonstoichiometric titania (TiOx) thin films close to metal-like conductivity. Journal of Materials Chemistry A, 2014, 2, 6631.	5.2	54
154	A New Route to Low Resistance Contacts for Performanceâ€Enhanced Organic Electronic Devices. Advanced Materials Interfaces, 2014, 1, 1300130.	1.9	15
155	Reversible Optical Switching of Infrared Antenna Resonances with Ultrathin Phase-Change Layers Using Femtosecond Laser Pulses. ACS Photonics, 2014, 1, 833-839.	3.2	181
156	Spectral Tuning of Localized Surface Phonon Polariton Resonators for Low-Loss Mid-IR Applications. ACS Photonics, 2014, 1, 718-724.	3.2	134
157	Specific Heat of (GeTe)_{<i>x</i>}(Sb₂Te₃)_{1â€"<i>x</i>} Phase-Change Materials: The Impact of Disorder and Anharmonicity. Chemistry of Materials, 2014, 26, 2307-2312.	3.2	40
158	How fragility makes phase-change data storage robust: insights from ab initio simulations. Scientific Reports, 2014, 4, 6529.	1.6	66
159	Exploring the limits of phase change memories. , 2014, , .		0
160	Advanced properties of Al-doped ZnO films with a seed layer approach for industrial thin film photovoltaic application. Thin Solid Films, 2013, 534, 474-481.	0.8	19
161	Using Low-Loss Phase-Change Materials for Mid-Infrared Antenna Resonance Tuning. Nano Letters, 2013, 13, 3470-3475.	4.5	257
162	Low-Cost Infrared Resonant Structures for Surface-Enhanced Infrared Absorption Spectroscopy in the Fingerprint Region from 3 to 13 Î¼m. Journal of Physical Chemistry C, 2013, 117, 11311-11316.	1.5	54

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163	(GeTe)_{<i>x</i>}â€“(Sb₂Te₃)_{1â€“<i>x</i>} phaseâ€change thin films as potential thermoelectric materials. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 147-152.	0.8	61
164	Stoichiometry dependence of resistance drift phenomena in amorphous GeSnTe phase-change alloys. Journal of Applied Physics, 2013, 113, .	1.1	31
165	High-pressure Raman spectroscopy of phase change materials. Applied Physics Letters, 2013, 103, .	1.5	21
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