

Matthias Wuttig

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

416
papers

25,968
citations

79
h-index

147
g-index

445
ext. papers

28,870
ext. citations

7.1
avg. IF

7.38
L-index

#	Paper	IF	Citations
4 ¹⁶	The glass transition of water, insight from phase change materials. <i>Journal of Non-Crystalline Solids: X</i> , 2022 , 14, 100084	2.5	2
4 ¹⁵	Electrically driven reprogrammable phase-change metasurface reaching 80% efficiency.. <i>Nature Communications</i> , 2022 , 13, 1696	17.4	21
4 ¹⁴	Two-Dimensional Platinum Diselenide Waveguide-Integrated Infrared Photodetectors.. <i>ACS Photonics</i> , 2022 , 9, 859-867	6.3	4
4 ¹³	Scaling and Confinement in Ultrathin Chalcogenide Films as Exemplified by GeTe.. <i>Small</i> , 2022 , e2201753	11	1
4 ¹²	Thermally Controlled Charge-Carrier Transitions in Disordered PbSbTe Chalcogenides. <i>Advanced Materials</i> , 2021 , e2106868	24	2
4 ¹¹	Far-Infrared Near-Field Optical Imaging and Kelvin Probe Force Microscopy of Laser-Crystallized and -Amorphized Phase Change Material GeSbTe. <i>Nano Letters</i> , 2021 , 21, 9012-9020	11.5	1
4 ¹⁰	Nb-Mediated Grain Growth and Grain-Boundary Engineering in Mg ₃ Sb ₂ -Based Thermoelectric Materials. <i>Advanced Functional Materials</i> , 2021 , 31, 2100258	15.6	15
4 ⁰⁹	Combining Switchable Phase-Change Materials and Phase-Transition Materials for Thermally Regulated Smart Mid-Infrared Modulators. <i>Advanced Optical Materials</i> , 2021 , 9, 2100417	8.1	6
4 ⁰⁸	Acceleration of Crystallization Kinetics in Ge-Sb-Te-Based Phase-Change Materials by Substitution of Ge by Sn. <i>Advanced Functional Materials</i> , 2021 , 31, 2004803	15.6	3
4 ⁰⁷	Enhancing thermoelectric performance of Sb ₂ Te ₃ through swapped bilayer defects. <i>Nano Energy</i> , 2021 , 79, 105484	17.1	10
4 ⁰⁶	Metavalent Bonding in Solids: Characteristic Representatives, Their Properties, and Design Options. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021 , 15, 2000482	2.5	12
4 ⁰⁵	Approaching the Glass Transition Temperature of GeTe by Crystallizing Ge ₁₅ Te ₈₅ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2021 , 15, 2000478	2.5	6
4 ⁰⁴	InSbTe as a programmable nanophotonics material platform for the infrared. <i>Nature Communications</i> , 2021 , 12, 924	17.4	19
4 ⁰³	Effects of Different Amounts of Nb Doping on Electrical, Optical and Structural Properties in Sputtered TiO ₂ Films. <i>Crystals</i> , 2021 , 11, 301	2.3	3
4 ⁰²	Boron Strengthened GeTe-Based Alloys for Robust Thermoelectric Devices with High Output Power Density. <i>Advanced Energy Materials</i> , 2021 , 11, 2102012	21.8	12
4 ⁰¹	Metavalent Bonding in Crystalline Solids: How Does It Collapse?. <i>Advanced Materials</i> , 2021 , 33, e2102356	24	23
4 ⁰⁰	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. <i>Nature Materials</i> , 2021 , 20, 1378-1384	27	79

399	The potential of chemical bonding to design crystallization and vitrification kinetics. <i>Nature Communications</i> , 2021 , 12, 4978	17.4	16
398	Superconducting Phase Induced by a Local Structure Transition in Amorphous Sb ₂ Se ₃ under High Pressure. <i>Physical Review Letters</i> , 2021 , 127, 127002	7.4	3
397	Disorder-induced Anderson-like localization for bidimensional thermoelectrics optimization. <i>Matter</i> , 2021 , 4, 2970-2984	12.7	3
396	Boron-Mediated Grain Boundary Engineering Enables Simultaneous Improvement of Thermoelectric and Mechanical Properties in N-Type Bi Te. <i>Small</i> , 2021 , 17, e2104067	11	7
395	Thermodynamics and kinetics of glassy and liquid phase-change materials. <i>Materials Science in Semiconductor Processing</i> , 2021 , 135, 106094	4.3	5
394	Glass transition of the phase change material AIST and its impact on crystallization. <i>Materials Science in Semiconductor Processing</i> , 2021 , 134, 105990	4.3	6
393	Materials Screening for Disorder-Controlled Chalcogenide Crystals for Phase-Change Memory Applications. <i>Advanced Materials</i> , 2021 , 33, e2006221	24	13
392	Discovering Electron-Transfer-Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where X = Te, Se, S, O). <i>Advanced Materials</i> , 2020 , 32, e2005533	24	29
391	Huygens Metasurfaces: All-Dielectric Programmable Huygens Metasurfaces (Adv. Funct. Mater. 19/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070122	15.6	2
390	Violation of the Stokes-Einstein relation in Ge ₂ Sb ₂ Te ₅ , GeTe, Ag ₄ In ₃ Sb ₆ Te ₂₆ , and Ge ₁₅ Sb ₈₅ , and its connection to fast crystallization. <i>Acta Materialia</i> , 2020 , 195, 491-500	8.4	12
389	Changes of Structure and Bonding with Thickness in Chalcogenide Thin Films. <i>Advanced Materials</i> , 2020 , 32, e2001033	24	7
388	Chalcogenides by Design: Functionality through Metavalent Bonding and Confinement. <i>Advanced Materials</i> , 2020 , 32, e1908302	24	91
387	The interplay between Peierls distortions and metavalent bonding in IV-VI compounds: comparing GeTe with related monochalcogenides. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 234002	3	22
386	All-Dielectric Programmable Huygens Metasurfaces. <i>Advanced Functional Materials</i> , 2020 , 30, 1910259	15.6	80
385	Employing Interfaces with Metavalently Bonded Materials for Phonon Scattering and Control of the Thermal Conductivity in TAGS-x Thermoelectric Materials. <i>Advanced Functional Materials</i> , 2020 , 30, 1910039	15.6	19
384	In situ study of vacancy disordering in crystalline phase-change materials under electron beam irradiation. <i>Acta Materialia</i> , 2020 , 187, 103-111	8.4	15
383	Uncovering relaxations in amorphous phase-change materials. <i>Science Advances</i> , 2020 , 6, eaay6726	14.3	13
382	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. <i>Materials Today</i> , 2020 , 32, 260-274	21.8	31

381	Disordering process of GeSb ₂ Te ₄ induced by ion irradiation. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 134001	3	1
380	Control of effective cooling rate upon magnetron sputter deposition of glassy Ge ₁₅ Te ₈₅ . <i>Scripta Materialia</i> , 2020 , 178, 223-226	5.6	11
379	Investigating Bond Rupture in Resonantly Bonded Solids by Field Evaporation of Carbon Nanotubes. <i>Nano Letters</i> , 2020 , 20, 116-121	11.5	12
378	Cu Intercalation and Br Doping to Thermoelectric SnSe ₂ Lead to Ultrahigh Electron Mobility and Temperature-Independent Power Factor. <i>Advanced Functional Materials</i> , 2020 , 30, 1908405	15.6	27
377	Lead Chalcogenides: Discovering Electron-Transfer-Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where X = Te, Se, S, O) (Adv. Mater. 49/2020). <i>Advanced Materials</i> , 2020 , 32, 2070370 ⁴	7.4	1
376	Exceptionally High Average Power Factor and Thermoelectric Figure of Merit in n-type PbSe by the Dual Incorporation of Cu and Te. <i>Journal of the American Chemical Society</i> , 2020 , 142, 15172-15186	16.4	26
375	Surface Polariton-Like s-Polarized Waveguide Modes in Switchable Dielectric Thin Films on Polar Crystals. <i>Advanced Optical Materials</i> , 2020 , 8, 1901056	8.1	11
374	Chalcogenide Thermoelectrics Empowered by an Unconventional Bonding Mechanism. <i>Advanced Functional Materials</i> , 2020 , 30, 1904862	15.6	88
373	Phase-change materials: Empowered by an unconventional bonding mechanism. <i>MRS Bulletin</i> , 2019 , 44, 699-704	3.2	14
372	Metallic filamentary conduction in valence change-based resistive switching devices: the case of TaO thin film with x ~ 1. <i>Nanoscale</i> , 2019 , 11, 16978-16990	7.7	10
371	Polariton nanophotonics using phase-change materials. <i>Nature Communications</i> , 2019 , 10, 4487	17.4	53
370	Advanced Optical Programming of Individual Meta-Atoms Beyond the Effective Medium Approach. <i>Advanced Materials</i> , 2019 , 31, e1901033	24	32
369	Quantification of Carrier Density Gradients along Axially Doped Silicon Nanowires Using Infrared Nanoscopy. <i>ACS Photonics</i> , 2019 , 6, 1744-1754	6.3	19
368	Femtosecond x-ray diffraction reveals a liquid-liquid phase transition in phase-change materials. <i>Science</i> , 2019 , 364, 1062-1067	33.3	84
367	Mg Deficiency in Grain Boundaries of n-Type Mg ₃ Sb ₂ Identified by Atom Probe Tomography. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1900429	4.6	23
366	Phase Change Materials and Superlattices for Non-Volatile Memories. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900130	2.5	17
365	Highly Confined and Switchable Mid-Infrared Surface Phonon Polariton Resonances of Planar Circular Cavities with a Phase Change Material. <i>Nano Letters</i> , 2019 , 19, 2549-2554	11.5	31
364	Stoichiometry Determination of Chalcogenide Superlattices by Means of X-Ray Diffraction and its Limits. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1800577	2.5	8

363	Direct atomic insight into the role of dopants in phase-change materials. <i>Nature Communications</i> , 2019 , 10, 3525	17.4	42
362	Switching between Crystallization from the Glassy and the Undercooled Liquid Phase in Phase Change Material Ge Sb Te. <i>Advanced Materials</i> , 2019 , 31, e1900784	24	44
361	Layer-Switching Mechanisms in Sb ₂ Te ₃ . <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900320	2.5	12
360	Impact of Bonding on the Stacking Defects in Layered Chalcogenides. <i>Advanced Functional Materials</i> , 2019 , 29, 1902332	15.6	13
359	Understanding the Structure and Properties of Sesqui-Chalcogenides (i.e., V VI or Pn Ch (Pn = Pnictogen, Ch = Chalcogen) Compounds) from a Bonding Perspective. <i>Advanced Materials</i> , 2019 , 31, e1904316	24.3	57
358	Role of grain boundaries in Ge-Sb-Te based chalcogenide superlattices. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 204002	1.8	9
357	Exploring ultrafast threshold switching in InSbTe phase change memory devices. <i>Scientific Reports</i> , 2019 , 9, 19251	4.9	13
356	Persistence of spin memory in a crystalline, insulating phase-change material. <i>Npj Quantum Materials</i> , 2019 , 4,	5	8
355	A Quantum-Mechanical Map for Bonding and Properties in Solids. <i>Advanced Materials</i> , 2019 , 31, e1806280	20.1	134
354	Disorder Control in Crystalline GeSb ₂ Te ₄ and its Impact on Characteristic Length Scales. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1800578	2.5	7
353	Designing crystallization in phase-change materials for universal memory and neuro-inspired computing. <i>Nature Reviews Materials</i> , 2019 , 4, 150-168	73.3	356
352	Metal-like conductivity in undoped TiO _{2-x} : Understanding an unconventional transparent conducting oxide. <i>Thin Solid Films</i> , 2019 , 669, 1-7	2.2	7
351	Investigation of the phase change mechanism of Ge ₆ Sn ₂ Sb ₂ Te ₁₁ . <i>Acta Materialia</i> , 2018 , 152, 278-287	8.4	12
350	Unique Bond Breaking in Crystalline Phase Change Materials and the Quest for Metavalent Bonding. <i>Advanced Materials</i> , 2018 , 30, e1706735	24	127
349	Evidence of Enhanced Carrier Collection in Cu(In,Ga)Se Grain Boundaries: Correlation with Microstructure. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 14759-14766	9.5	19
348	2D or Not 2D: Strain Tuning in Weakly Coupled Heterostructures. <i>Advanced Functional Materials</i> , 2018 , 28, 1705901	15.6	39
347	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 3609-3615	9.5	48
346	Unconventional two-dimensional germanium dichalcogenides. <i>Nanoscale</i> , 2018 , 10, 7363-7368	7.7	21

345	Controlled Crystal Growth of Indium Selenide, InSe, and the Crystal Structures of InSe . <i>Inorganic Chemistry</i> , 2018 , 57, 11775-11781	5.1	49
344	Indium-Tin-Oxide (ITO) Work Function Tailoring by Covalently Bound Carboxylic Acid Self-Assembled Monolayers. <i>Physica Status Solidi (B): Basic Research</i> , 2018 , 255, 1800075	1.3	6
343	Probing hyperbolic polaritons using infrared attenuated total reflectance micro-spectroscopy. <i>MRS Communications</i> , 2018 , 8, 1418-1425	2.7	12
342	Sb ₂ Te ₃ Growth Study Reveals That Formation of Nanoscale Charge Carrier Domains Is an Intrinsic Feature Relevant for Electronic Applications. <i>ACS Applied Nano Materials</i> , 2018 , 1, 6834-6842	5.6	7
341	Surface Modifications by Self-Assembled Monolayers to Improve Organic Opto-Electronic Devices 2018 , 835-841		1
340	Vibrational Properties of Ge-Sb-Te Phase-Change Alloys Studied by Temperature-Dependent IR and Raman Spectroscopy. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2018 , 377-379 ^{0.2}		
339	Atomic disordering processes in crystalline GeTe induced by ion irradiation. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 495103	3	3
338	Vibrational Properties of Ge-Sb-Te Phase-Change Alloys Studied by IR and Raman Spectroscopy at Different Temperatures. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2018 , 441-441 ^{0.2}		
337	Tailoring Thermoelectric Transport Properties of Ag-Alloyed PbTe: Effects of Microstructure Evolution. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 38994-39001	9.5	12
336	Incipient Metals: Functional Materials with a Unique Bonding Mechanism. <i>Advanced Materials</i> , 2018 , 30, e1803777	24	154
335	High-Performance n-Type PbSe-CuSe Thermoelectrics through Conduction Band Engineering and Phonon Softening. <i>Journal of the American Chemical Society</i> , 2018 , 140, 15535-15545	16.4	64
334	Correlation between the transport mechanisms in conductive filaments inside Ta ₂ O ₅ -based resistive switching devices and in substoichiometric TaOx thin films. <i>Applied Physics Letters</i> , 2018 , 112, 213504	3.4	12
333	Thermoelectric Performance of IV-VI Compounds with Octahedral-Like Coordination: A Chemical-Bonding Perspective. <i>Advanced Materials</i> , 2018 , 30, e1801787	24	54
332	Genesis and Effects of Swapping Bilayers in Hexagonal GeSb ₂ Te ₄ . <i>Chemistry of Materials</i> , 2018 , 30, 4770-4777	4.7	29
331	Unerwartete Ge-Ge-Kontakte in der zweidimensionalen Phase Ge ₄ Se ₃ Te und Analyse ihres chemischen Ursprungs mittels Energiedichte(DOE)-Funktion. <i>Angewandte Chemie</i> , 2017 , 129, 10338-10342	3.6	1
330	Unexpected Ge-Ge Contacts in the Two-Dimensional Ge Se Te Phase and Analysis of Their Chemical Cause with the Density of Energy (DOE) Function. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 10204-10208	16.4	45
329	Simultaneous optimization of electrical and thermal transport properties of Bi _{0.5} Sb _{1.5} Te ₃ thermoelectric alloy by twin boundary engineering. <i>Nano Energy</i> , 2017 , 37, 203-213	17.1	115
328	Enhanced temperature stability and exceptionally high electrical contrast of selenium substituted Ge ₂ Sb ₂ Te ₅ phase change materials. <i>RSC Advances</i> , 2017 , 7, 17164-17172	3.7	17

327	Role of Nanostructuring and Microstructuring in Silver Antimony Telluride Compounds for Thermoelectric Applications. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 14779-14790	9.5	26
326	Dielectric properties of amorphous phase-change materials. <i>Physical Review B</i> , 2017 , 95,	3.3	35
325	Impact of Pressure on the Resonant Bonding in Chalcogenides. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 25447-25454	3.8	18
324	Investigating the Influence of Resonant Bonding on the Optical Properties of Phase Change Materials (GeTe) _x SnSb ₂ Se ₄ . <i>Chemistry of Materials</i> , 2017 , 29, 9320-9327	9.6	13
323	Design Parameters for Phase-Change Materials for Nanostructure Resonance Tuning. <i>Advanced Optical Materials</i> , 2017 , 5, 1700261	8.1	38
322	Chemical Tuning of Carrier Type and Concentration in a Homologous Series of Crystalline Chalcogenides. <i>Chemistry of Materials</i> , 2017 , 29, 6749-6757	9.6	17
321	Innenrücktitelbild: Unerwartete Ge-Ge-Kontakte in der zweidimensionalen Phase Ge ₄ Se ₃ Te und Analyse ihres chemischen Ursprungs mittels Energiedichte(DOE)-Funktion (Angew. Chem. 34/2017). <i>Angewandte Chemie</i> , 2017 , 129, 10381-10381	3.6	
320	Beam switching and bifocal zoom lensing using active plasmonic metasurfaces. <i>Light: Science and Applications</i> , 2017 , 6, e17016	16.7	210
319	Phase-change materials for non-volatile photonic applications. <i>Nature Photonics</i> , 2017 , 11, 465-476	33.9	582
318	Formation of resonant bonding during growth of ultrathin GeTe films. <i>NPG Asia Materials</i> , 2017 , 9, e396- e396	3.9	20
317	A Review on Disorder-Driven Metal-Insulator Transition in Crystalline Vacancy-Rich GeSbTe Phase-Change Materials. <i>Materials</i> , 2017 , 10,	3.5	38
316	GeSbTe Phase-Change Materials 2017 , 735-749		1
315	Strain Development and Damage Accumulation Under Ion Irradiation of Polycrystalline GeSbTe Alloys. <i>Nanoscience and Nanotechnology Letters</i> , 2017 , 9, 1095-1101	0.8	4
314	Interband characterization and electronic transport control of nanoscaled GeTe/Sb ₂ Te ₃ superlattices. <i>Physical Review B</i> , 2016 , 94,	3.3	9
313	Ordered Peierls distortion prevented at growth onset of GeTe ultra-thin films. <i>Scientific Reports</i> , 2016 , 6, 32895	4.9	15
312	Revisiting the Local Structure in Ge-Sb-Te based Chalcogenide Superlattices. <i>Scientific Reports</i> , 2016 , 6, 22353	4.9	57
311	Carbon-Based Resistive Memories 2016 ,		3
310	Element-resolved atomic structure imaging of rocksalt Ge ₂ Sb ₂ Te ₅ phase-change material. <i>Applied Physics Letters</i> , 2016 , 108, 191902	3.4	72

309	Atomic stacking and van-der-Waals bonding in GeTeSb ₂ Te ₃ superlattices. <i>Journal of Materials Research</i> , 2016 , 31, 3115-3124	2.5	45
308	Reversible optical switching of highly confined phonon-polaritons with an ultrathin phase-change material. <i>Nature Materials</i> , 2016 , 15, 870-5	27	251
307	Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials. <i>Physical Review Letters</i> , 2016 , 117, 067601	7.4	47
306	Dithiocarbamate Self-Assembled Monolayers as Efficient Surface Modifiers for Low Work Function Noble Metals. <i>Langmuir</i> , 2016 , 32, 8812-7	4	8
305	Understanding the conductive channel evolution in Na:WO _(3-x) -based planar devices. <i>Nanoscale</i> , 2015 , 7, 6023-30	7.7	13
304	How Supercooled Liquid Phase-Change Materials Crystallize: Snapshots after Femtosecond Optical Excitation. <i>Chemistry of Materials</i> , 2015 , 27, 5641-5646	9.6	42
303	Vibrational properties and bonding nature of SbSe and their implications for chalcogenide materials. <i>Chemical Science</i> , 2015 , 6, 5255-5262	9.4	62
302	Aging mechanisms in amorphous phase-change materials. <i>Nature Communications</i> , 2015 , 6, 7467	17.4	170
301	Phase-Change and Redox-Based Resistive Switching Memories. <i>Proceedings of the IEEE</i> , 2015 , 103, 1274-1288	14.9	112
300	Plasmonic Absorbers: A Switchable Mid-Infrared Plasmonic Perfect Absorber with Multispectral Thermal Imaging Capability (Adv. Mater. 31/2015). <i>Advanced Materials</i> , 2015 , 27, 4526-4526	24	3
299	A chemical link between GeSb ₂ Te and InSb ₂ Te phase-change materials. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 9519-9523	7.1	34
298	Incident Angle-Tuning of Infrared Antenna Array Resonances for Molecular Sensing. <i>ACS Photonics</i> , 2015 , 2, 1498-1504	6.3	35
297	Orbital mixing in solids as a descriptor for materials mapping. <i>Solid State Communications</i> , 2015 , 203, 31-34	1.6	13
296	Density-functional theory guided advances in phase-change materials and memories. <i>MRS Bulletin</i> , 2015 , 40, 856-869	3.2	52
295	Disorder-Induced Localization in Crystalline Pseudo-Binary GeTeSb ₂ Te ₃ Alloys between Ge ₃ Sb ₂ Te ₆ and GeTe. <i>Advanced Functional Materials</i> , 2015 , 25, 6399-6406	15.6	50
294	Low-Temperature Transport in Crystalline Ge ₁ Sb ₂ Te ₄ . <i>Advanced Functional Materials</i> , 2015 , 25, 6390-6398	9.6	37
293	Relation between bandgap and resistance drift in amorphous phase change materials. <i>Scientific Reports</i> , 2015 , 5, 17362	4.9	40
292	Imaging of phase change materials below a capping layer using correlative infrared near-field microscopy and electron microscopy. <i>Applied Physics Letters</i> , 2015 , 107, 151902	3.4	15

291	Effects of stoichiometry on the transport properties of crystalline phase-change materials. <i>Scientific Reports</i> , 2015 , 5, 13496	4.9	23
290	A Switchable Mid-Infrared Plasmonic Perfect Absorber with Multispectral Thermal Imaging Capability. <i>Advanced Materials</i> , 2015 , 27, 4597-603	24	354
289	Microscopic Complexity in Phase-Change Materials and its Role for Applications. <i>Advanced Functional Materials</i> , 2015 , 25, 6343-6359	15.6	71
288	Reversing the Resistivity Contrast in the Phase-Change Memory Material GeSb ₂ Te ₄ Using High Pressure. <i>Advanced Electronic Materials</i> , 2015 , 1, 1500240	6.4	17
287	Active Chiral Plasmonics. <i>Nano Letters</i> , 2015 , 15, 4255-60	11.5	208
286	Disorder Control in Crystalline GeSbTe Using High Pressure. <i>Advanced Science</i> , 2015 , 2, 1500117	13.6	28
285	Impact of vacancy ordering on thermal transport in crystalline phase-change materials. <i>Reports on Progress in Physics</i> , 2015 , 78, 013001	14.4	76
284	How fragility makes phase-change data storage robust: insights from ab initio simulations. <i>Scientific Reports</i> , 2014 , 4, 6529	4.9	56
283	Amorphous and highly nonstoichiometric titania (TiO _x) thin films close to metal-like conductivity. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 6631	13	41
282	A New Route to Low Resistance Contacts for Performance-Enhanced Organic Electronic Devices. <i>Advanced Materials Interfaces</i> , 2014 , 1, 1300130	4.6	13
281	Reversible Optical Switching of Infrared Antenna Resonances with Ultrathin Phase-Change Layers Using Femtosecond Laser Pulses. <i>ACS Photonics</i> , 2014 , 1, 833-839	6.3	151
280	Spectral Tuning of Localized Surface Phonon Polariton Resonators for Low-Loss Mid-IR Applications. <i>ACS Photonics</i> , 2014 , 1, 718-724	6.3	109
279	Specific Heat of (GeTe) _x (Sb ₂ Te ₃) _{1-x} Phase-Change Materials: The Impact of Disorder and Anharmonicity. <i>Chemistry of Materials</i> , 2014 , 26, 2307-2312	9.6	33
278	Phase change materials and phase change memory. <i>MRS Bulletin</i> , 2014 , 39, 703-710	3.2	295
277	Phase-Change Materials for Data Storage Applications 2014 , 169-193		2
276	Ion beam assisted sputter deposition of ZnO for silicon thin-film solar cells. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 105202	3	7
275	Impact of Maxwell rigidity transitions on resistance drift phenomena in Ge _x Te _{1-x} glasses. <i>Applied Physics Letters</i> , 2014 , 105, 092108	3.4	17
274	Bonding nature of local structural motifs in amorphous GeTe. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 10817-20	16.4	102

- 273 Ultrafast terahertz-induced response of GeSbTe phase-change materials. *Applied Physics Letters*, **2014**, 104, 251907 3.4 27
- 272 Bindungseigenschaften lokaler Struktur motive in amorphem GeTe. *Angewandte Chemie*, **2014**, 126, 10993-10997
- 271 Increasing the carbon deposition rate using sputter yield amplification upon serial magnetron co-sputtering. *Surface and Coatings Technology*, **2014**, 252, 74-78 4.4 3
- 270 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 2.2 19
- 269 Using low-loss phase-change materials for mid-infrared antenna resonance tuning. *Nano Letters*, **2013**, 13, 3470-5 11.5 207
- 268 Low-Cost Infrared Resonant Structures for Surface-Enhanced Infrared Absorption Spectroscopy in the Fingerprint Region from 3 to 13 μm . *Journal of Physical Chemistry C*, **2013**, 117, 11311-11316 3.8 46
- 267 $(\text{GeTe})_x(\text{Sb}_2\text{Te}_3)_{1-x}$ phase-change thin films as potential thermoelectric materials. *Physica Status Solidi (A) Applications and Materials Science*, **2013**, 210, 147-152 1.6 53
- 266 Stoichiometry dependence of resistance drift phenomena in amorphous GeSnTe phase-change alloys. *Journal of Applied Physics*, **2013**, 113, 023704 2.5 27
- 265 High-pressure Raman spectroscopy of phase change materials. *Applied Physics Letters*, **2013**, 103, 191908.4 18
- 264 Measurement of crystal growth velocity in a melt-quenched phase-change material. *Nature Communications*, **2013**, 4, 2371 17.4 144
- 263 Defects in amorphous phase-change materials. *Journal of Materials Research*, **2013**, 28, 1139-1147 2.5 34
- 262 Nanosession: Valence Change Memories - Redox Mechanism and Modelling **2013**, 219-231
- 261 Poster: Spin-Related Phenomena **2013**, 589-632
- 260 Nanosession: Phase Change Memories **2013**, 163-176
- 259 Design of Novel Dielectric Surface Modifications for Perylene Thin-Film Transistors. *Advanced Functional Materials*, **2012**, 22, 415-420 15.6 34
- 258 Simultaneous calorimetric and quick-EXAFS measurements to study the crystallization process in phase-change materials. *Journal of Synchrotron Radiation*, **2012**, 19, 806-13 2.4 8
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