

Matthias Wuttig

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28,870
ext. citations

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L-index

#	Paper	IF	Citations
416	Phase-change materials for rewriteable data storage. <i>Nature Materials</i> , 2007 , 6, 824-32	27	2537
415	Resonant bonding in crystalline phase-change materials. <i>Nature Materials</i> , 2008 , 7, 653-8	27	775
414	Phase-change materials for non-volatile photonic applications. <i>Nature Photonics</i> , 2017 , 11, 465-476	33.9	582
413	Structural transformations of Ge ₂ Sb ₂ Te ₅ films studied by electrical resistance measurements. <i>Journal of Applied Physics</i> , 2000 , 87, 4130-4134	2.5	571
412	A map for phase-change materials. <i>Nature Materials</i> , 2008 , 7, 972-7	27	559
411	Formation of a well-ordered aluminium oxide overlayer by oxidation of NiAl(110). <i>Surface Science</i> , 1991 , 259, 235-252	1.8	502
410	Magnetic live surface layers in Fe/Cu(100). <i>Physical Review Letters</i> , 1992 , 69, 3831-3834	7.4	455
409	The effect of front ZnO:Al surface texture and optical transparency on efficient light trapping in silicon thin-film solar cells. <i>Journal of Applied Physics</i> , 2007 , 101, 074903	2.5	437
408	Disorder-induced localization in crystalline phase-change materials. <i>Nature Materials</i> , 2011 , 10, 202-8	27	435
407	Design rules for phase-change materials in data storage applications. <i>Advanced Materials</i> , 2011 , 23, 2030-278	27.8	381
406	The role of vacancies and local distortions in the design of new phase-change materials. <i>Nature Materials</i> , 2007 , 6, 122-8	27	367
405	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
404	A Switchable Mid-Infrared Plasmonic Perfect Absorber with Multispectral Thermal Imaging Capability. <i>Advanced Materials</i> , 2015 , 27, 4597-603	24	354
403	Nanosecond switching in GeTe phase change memory cells. <i>Applied Physics Letters</i> , 2009 , 95, 043108	3.4	340
402	Phase change materials and phase change memory. <i>MRS Bulletin</i> , 2014 , 39, 703-710	3.2	295
401	Density changes upon crystallization of Ge ₂ Sb _{2.04} Te _{4.74} films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 230-233	2.9	292
400	Structural Instability of Ferromagnetic fcc Fe Films on Cu(100). <i>Physical Review Letters</i> , 1995 , 74, 765-768	7.4	292

399	Unravelling the interplay of local structure and physical properties in phase-change materials. <i>Nature Materials</i> , 2006 , 5, 56-62	27	283
398	Laser induced crystallization of amorphous Ge ₂ Sb ₂ Te ₅ films. <i>Journal of Applied Physics</i> , 2001 , 89, 3168-3176	3.6	268
397	Reversible optical switching of highly confined phonon-polaritons with an ultrathin phase-change material. <i>Nature Materials</i> , 2016 , 15, 870-5	27	251
396	Efforts to improve carrier mobility in radio frequency sputtered aluminum doped zinc oxide films. <i>Journal of Applied Physics</i> , 2004 , 95, 1911-1917	2.5	232
395	Role of vacancies in metal-insulator transitions of crystalline phase-change materials. <i>Nature Materials</i> , 2012 , 11, 952-6	27	220
394	Beam switching and bifocal zoom lensing using active plasmonic metasurfaces. <i>Light: Science and Applications</i> , 2017 , 6, e17016	16.7	210
393	Active Chiral Plasmonics. <i>Nano Letters</i> , 2015 , 15, 4255-60	11.5	208
392	Using low-loss phase-change materials for mid-infrared antenna resonance tuning. <i>Nano Letters</i> , 2013 , 13, 3470-5	11.5	207
391	Magnetically driven buckling and stability of ordered surface alloys: Cu(100)c(2 x 2)Mn. <i>Physical Review Letters</i> , 1993 , 70, 3619-3622	7.4	173
390	Aging mechanisms in amorphous phase-change materials. <i>Nature Communications</i> , 2015 , 6, 7467	17.4	170
389	Oxygen on Cu(100) – a case of an adsorbate induced reconstruction. <i>Surface Science</i> , 1989 , 213, 103-136	1.8	170
388	Rewritable phase-change optical recording in Ge ₂ Sb ₂ Te ₅ films induced by picosecond laser pulses. <i>Applied Physics Letters</i> , 2004 , 84, 2250-2252	3.4	168
387	Atomic force microscopy measurements of crystal nucleation and growth rates in thin films of amorphous Te alloys. <i>Applied Physics Letters</i> , 2004 , 84, 5240-5242	3.4	157
386	Incipient Metals: Functional Materials with a Unique Bonding Mechanism. <i>Advanced Materials</i> , 2018 , 30, e1803777	24	154
385	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
384	Measurement of crystal growth velocity in a melt-quenched phase-change material. <i>Nature Communications</i> , 2013 , 4, 2371	17.4	144
383	Reversible switching in phase-change materials. <i>Materials Today</i> , 2008 , 11, 20-27	21.8	141
382	Origin of the optical contrast in phase-change materials. <i>Physical Review Letters</i> , 2007 , 98, 236403	7.4	140

381	On the deposition rate in a high power pulsed magnetron sputtering discharge. <i>Applied Physics Letters</i> , 2006 , 89, 154104	3.4	135
380	Investigation of SnSe, SnSe ₂ , and Sn ₂ Se ₃ alloys for phase change memory applications. <i>Journal of Applied Physics</i> , 2008 , 103, 083523	2.5	134
379	A Quantum-Mechanical Map for Bonding and Properties in Solids. <i>Advanced Materials</i> , 2019 , 31, e1806280	2.4	134
378	High-power laser light source for near-field optics and its application to high-density optical data storage. <i>Applied Physics Letters</i> , 1999 , 75, 1515-1517	3.4	132
377	Mechanical stresses upon crystallization in phase change materials. <i>Applied Physics Letters</i> , 2001 , 79, 3597-3599	3.4	130
376	Unique Bond Breaking in Crystalline Phase Change Materials and the Quest for Metavalent Bonding. <i>Advanced Materials</i> , 2018 , 30, e1706735	2.4	127
375	Phase change materials: From material science to novel storage devices. <i>Applied Physics A: Materials Science and Processing</i> , 2007 , 87, 411-417	2.6	120
374	Nucleation, Growth, and Aggregation of Ag Clusters on Liquid Surfaces. <i>Physical Review Letters</i> , 1998 , 81, 622-625	7.4	119
373	Atomic force microscopy study of laser induced phase transitions in Ge ₂ Sb ₂ Te ₅ . <i>Journal of Applied Physics</i> , 1999 , 86, 5879-5887	2.5	118
372	Growth, structure and morphology of ultrathin iron films on Cu(100). <i>Surface Science</i> , 1992 , 264, 406-418	1.8	118
371	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
370	Threshold field of phase change memory materials measured using phase change bridge devices. <i>Applied Physics Letters</i> , 2009 , 95, 082101	3.4	114
369	Surface textured MF-sputtered ZnO films for microcrystalline silicon-based thin-film solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2006 , 90, 3054-3060	6.4	113
368	Phase-Change and Redox-Based Resistive Switching Memories. <i>Proceedings of the IEEE</i> , 2015 , 103, 1274-1288	1.49	112
367	Applied physics. Phase-change memories on a diet. <i>Science</i> , 2011 , 332, 543-4	33.3	112
366	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
365	Recent development on surface-textured ZnO:Al films prepared by sputtering for thin-film solar cell application. <i>Thin Solid Films</i> , 2008 , 516, 5836-5841	2.2	108
364	Process characteristics and film properties upon growth of TiO _x films by high power pulsed magnetron sputtering. <i>Journal Physics D: Applied Physics</i> , 2007 , 40, 2108-2114	3	108

363	Structural and optical properties of thin zirconium oxide films prepared by reactive direct current magnetron sputtering. <i>Journal of Applied Physics</i> , 2002 , 92, 3599-3607	2.5	108
362	Phase-Change Materials: Vibrational Softening upon Crystallization and Its Impact on Thermal Properties. <i>Advanced Functional Materials</i> , 2011 , 21, 2232-2239	15.6	105
361	On the relationship between the peak target current and the morphology of chromium nitride thin films deposited by reactive high power pulsed magnetron sputtering. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 015304	3	105
360	Calorimetric measurements of phase transformations in thin films of amorphous Te alloys used for optical data storage. <i>Journal of Applied Physics</i> , 2003 , 93, 2389-2393	2.5	105
359	Adsorbate-induced surface stress: Phonon anomaly and reconstruction on Ni(001) surfaces. <i>Physical Review Letters</i> , 1986 , 56, 1583-1586	7.4	103
358	Bonding nature of local structural motifs in amorphous GeTe. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 10817-20	16.4	102
357	Calorimetric measurements of structural relaxation and glass transition temperatures in sputtered films of amorphous Te alloys used for phase change recording. <i>Journal of Materials Research</i> , 2007 , 22, 748-754	2.5	99
356	Structural transformations of fcc iron films on Cu(100). <i>Surface Science</i> , 1993 , 291, 14-28	1.8	99
355	Photochromic silver nanoparticles fabricated by sputter deposition. <i>Journal of Applied Physics</i> , 2005 , 97, 094305	2.5	98
354	Nanosecond threshold switching of GeTe ₆ cells and their potential as selector devices. <i>Applied Physics Letters</i> , 2012 , 100, 143505	3.4	95
353	Material study on reactively sputtered zinc oxide for thin film silicon solar cells. <i>Thin Solid Films</i> , 2006 , 502, 286-291	2.2	92
352	Correlation between structure, stress and deposition parameters in direct current sputtered zinc oxide films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2002 , 20, 2084	2.9	92
351	Chalcogenides by Design: Functionality through Metavalent Bonding and Confinement. <i>Advanced Materials</i> , 2020 , 32, e1908302	24	91
350	Electronic structure of two-dimensional magnetic alloys: c(2×) Mn on Cu(100) and Ni(100). <i>Physical Review B</i> , 1997 , 55, 5404-5415	3.3	88
349	Chalcogenide Thermoelectrics Empowered by an Unconventional Bonding Mechanism. <i>Advanced Functional Materials</i> , 2020 , 30, 1904862	15.6	88
348	The correlation between structure and magnetism for ultrathin metal films and surface alloys. <i>Surface Science</i> , 1995 , 331-333, 659-672	1.8	87
347	Switching Casimir forces with phase-change materials. <i>Physical Review A</i> , 2010 , 82,	2.6	86
346	Towards understanding the superior properties of transition metal oxynitrides prepared by reactive DC magnetron sputtering. <i>Thin Solid Films</i> , 2006 , 502, 228-234	2.2	86

345	Femtosecond x-ray diffraction reveals a liquid-liquid phase transition in phase-change materials. <i>Science</i> , 2019 , 364, 1062-1067	33.3	84
344	Sb-Se-based phase-change memory device with lower power and higher speed operations. <i>IEEE Electron Device Letters</i> , 2006 , 27, 445-447	4.4	84
343	The Rayleigh phonon dispersion curve on Cu(100) in the $\bar{\Gamma}$ direction. <i>Solid State Communications</i> , 1986 , 57, 445-447	1.6	84
342	Structure and growth of Mn on Cu(100). <i>Surface Science</i> , 1992 , 279, 251-264	1.8	83
341	LEED structure determination of two ordered surface alloys: Cu(100)-c(2 \times 2)Mn and Ni(100)-c(2 \times 2)Mn. <i>Surface Science</i> , 1993 , 292, 189-195	1.8	82
340	All-Dielectric Programmable Huygens Metasurfaces. <i>Advanced Functional Materials</i> , 2020 , 30, 1910259	15.6	80
339	Influence of Bi doping upon the phase change characteristics of Ge ₂ Sb ₂ Te ₅ . <i>Journal of Applied Physics</i> , 2004 , 96, 5557-5562	2.5	80
338	The Rayleigh phonon dispersion on Cu(100): A stress induced frequency shift?. <i>European Physical Journal B</i> , 1986 , 65, 71-74	1.2	79
337	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. <i>Nature Materials</i> , 2021 , 20, 1378-1384	27	79
336	Correlation between structure, stress and optical properties in direct current sputtered molybdenum oxide films. <i>Thin Solid Films</i> , 2003 , 429, 135-143	2.2	78
335	Structure determination for Fe films on Cu(100). <i>Surface Science</i> , 1993 , 282, 237-245	1.8	78
334	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
333	Temperature stability of sputtered niobium oxide films. <i>Journal of Applied Physics</i> , 2002 , 91, 4863-4871	2.5	75
332	Viscosity and elastic constants of thin films of amorphous Te alloys used for optical data storage. <i>Journal of Applied Physics</i> , 2003 , 94, 4908	2.5	73
331	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
330	Microscopic Complexity in Phase-Change Materials and its Role for Applications. <i>Advanced Functional Materials</i> , 2015 , 25, 6343-6359	15.6	71
329	Phase change materials. <i>MRS Bulletin</i> , 2012 , 37, 118-123	3.2	71
328	Kinetics of crystal nucleation in undercooled droplets of Sb- and Te-based alloys used for phase change recording. <i>Journal of Applied Physics</i> , 2005 , 98, 054910	2.5	71

327	Phase Change Materials: Challenges on the Path to a Universal Storage Device. <i>Annual Review of Condensed Matter Physics</i> , 2012 , 3, 215-237	19.7	68
326	Effect of indium doping on Ge ₂ Sb ₂ Te ₅ thin films for phase-change optical storage. <i>Applied Physics A: Materials Science and Processing</i> , 2005 , 80, 1611-1616	2.6	68
325	Minimum time for laser induced amorphization of Ge ₂ Sb ₂ Te ₅ films. <i>Journal of Applied Physics</i> , 2000 , 88, 657-664	2.5	68
324	Process stabilization and enhancement of deposition rate during reactive high power pulsed magnetron sputtering of zirconium oxide. <i>Surface and Coatings Technology</i> , 2008 , 202, 5033-5035	4.4	67
323	Identification of Te alloys with suitable phase change characteristics. <i>Applied Physics Letters</i> , 2003 , 83, 2572-2574	3.4	67
322	Crystal morphology and nucleation in thin films of amorphous Te alloys used for phase change recording. <i>Journal of Applied Physics</i> , 2005 , 98, 054902	2.5	67
321	Crystallization kinetics of Ge ₄ Sb ₁ Te ₅ films. <i>Thin Solid Films</i> , 2002 , 408, 310-315	2.2	66
320	Crystallization kinetics of sputter-deposited amorphous AgInSbTe films. <i>Journal of Applied Physics</i> , 2001 , 90, 3816-3821	2.5	65
319	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
318	The Science and Technology of Phase Change Materials. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2012 , 638, 2455-2465	1.3	63
317	Experimental studies and limitations of the light trapping and optical losses in microcrystalline silicon solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2008 , 92, 1037-1042	6.4	63
316	Influence of nitrogen content on properties of direct current sputtered TiO _x N _y films. <i>Physica Status Solidi A</i> , 2004 , 201, 90-102		63
315	Vibrational properties and bonding nature of SbSe and their implications for chalcogenide materials. <i>Chemical Science</i> , 2015 , 6, 5255-5262	9.4	62
314	Structure formation upon reactive direct current magnetron sputtering of transition metal oxide films. <i>Applied Physics Letters</i> , 2004 , 85, 748-750	3.4	61
313	Structure-performance relationship in pentacene/Al ₂ O ₃ thin-film transistors. <i>Synthetic Metals</i> , 2004 , 146, 279-282	3.6	59
312	Revisiting the Local Structure in Ge-Sb-Te based Chalcogenide Superlattices. <i>Scientific Reports</i> , 2016 , 6, 22353	4.9	57
311	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	24.316	57
310	Physical properties of thin GeO ₂ films produced by reactive DC magnetron sputtering. <i>Thin Solid Films</i> , 2000 , 365, 82-89	2.2	57

309	How fragility makes phase-change data storage robust: insights from ab initio simulations. <i>Scientific Reports</i> , 2014 , 4, 6529	4.9	56
308	Effect of heat treatment on structural, optical and mechanical properties of sputtered TiOxNy films. <i>Thin Solid Films</i> , 2004 , 468, 48-56	2.2	56
307	Structure and composition of Pt10Ni90(100): A low energy electron diffraction study. <i>Surface Science</i> , 1990 , 233, 239-247	1.8	56
306	The Dependence of Crystal Structure of Te-Based Phase-Change Materials on the Number of Valence Electrons. <i>Advanced Materials</i> , 2004 , 16, 439-443	24	54
305	Thermoelectric Performance of IV-VI Compounds with Octahedral-Like Coordination: A Chemical-Bonding Perspective. <i>Advanced Materials</i> , 2018 , 30, e1801787	24	54
304	Polariton nanophotonics using phase-change materials. <i>Nature Communications</i> , 2019 , 10, 4487	17.4	53
303	(GeTe) _x (Sb ₂ Te ₃) _{1-x} phase-change thin films as potential thermoelectric materials. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013 , 210, 147-152	1.6	53
302	Weak antilocalization and disorder-enhanced electron interactions in annealed films of the phase-change compound GeSb ₂ Te ₄ . <i>Physical Review B</i> , 2012 , 86,	3.3	53
301	Density-functional theory guided advances in phase-change materials and memories. <i>MRS Bulletin</i> , 2015 , 40, 856-869	3.2	52
300	On the phase formation of titanium oxide films grown by reactive high power pulsed magnetron sputtering. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 115204	3	52
299	Low-temperature p2mg (2 × 1) structure of ultrathin epitaxial films Fe/Cu(100). <i>Surface Science</i> , 1991 , 256, 115-122	1.8	51
298	Disorder-Induced Localization in Crystalline Pseudo-Binary GeTe _{1-x} Sb _{2x} Te ₃ Alloys between Ge ₃ Sb ₂ Te ₆ and GeTe. <i>Advanced Functional Materials</i> , 2015 , 25, 6399-6406	15.6	50
297	Controlled Crystal Growth of Indium Selenide, InSe, and the Crystal Structures of HnSe. <i>Inorganic Chemistry</i> , 2018 , 57, 11775-11781	5.1	49
296	The role of energetic ion bombardment during growth of TiO ₂ thin films by reactive sputtering. <i>Journal Physics D: Applied Physics</i> , 2010 , 43, 405303	3	49
295	Morphology and structure of laser-modified Ge ₂ Sb ₂ Te ₅ films studied by transmission electron microscopy. <i>Thin Solid Films</i> , 2001 , 389, 239-244	2.2	49
294	Structural and magnetic properties of ultrathin Fe films deposited at low temperature on Cu(100). <i>Surface Science</i> , 1994 , 321, 32-46	1.8	49
293	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 3609-3615	9.5	48
292	Changes in electronic structure and chemical bonding upon crystallization of the phase change material GeSb ₂ Te ₄ . <i>Physical Review Letters</i> , 2008 , 100, 016402	7.4	48

291	Structural transformation of Sb_xSe_{100-x} thin films for phase change nonvolatile memory applications. <i>Journal of Applied Physics</i> , 2005 , 98, 014904	2.5	48
290	Growth and characterization of zirconium oxynitride films prepared by reactive direct current magnetron sputtering. <i>Journal of Applied Physics</i> , 2002 , 92, 2461-2466	2.5	48
289	Atomic mechanisms of the formation of an ordered surface alloy: an STM investigation of. <i>Surface Science</i> , 1997 , 371, 14-29	1.8	47
288	Preparation and characterization of tantalum oxide films produced by reactive DC magnetron sputtering. <i>Physica Status Solidi A</i> , 2003 , 198, 99-110		47
287	Picosecond Electric-Field-Induced Threshold Switching in Phase-Change Materials. <i>Physical Review Letters</i> , 2016 , 117, 067601	7.4	47
286	Low-Cost Infrared Resonant Structures for Surface-Enhanced Infrared Absorption Spectroscopy in the Fingerprint Region from 3 to 13 μ m. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 11311-11316	3.8	46
285	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
284	Atomic stacking and van-der-Waals bonding in $GeTe_3B_2Te_3$ superlattices. <i>Journal of Materials Research</i> , 2016 , 31, 3115-3124	2.5	45
283	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
282	Atomic mechanisms for the diffusion of Mn atoms incorporated in the Cu(100) surface: an STM study. <i>Surface Science</i> , 1997 , 371, 1-13	1.8	44
281	Epitaxial Pt(111) thin film electrodes on YSZ(111) and YSZ(100) [Preparation and characterisation. <i>Solid State Ionics</i> , 2007 , 178, 327-337	3.3	44
280	Process stabilization and increase of the deposition rate in reactive sputtering of metal oxides and oxynitrides. <i>Applied Physics Letters</i> , 2006 , 88, 161504	3.4	43
279	Ultrathin Metal Films. <i>Springer Tracts in Modern Physics</i> , 2004 ,	0.1	43
278	How Supercooled Liquid Phase-Change Materials Crystallize: Snapshots after Femtosecond Optical Excitation. <i>Chemistry of Materials</i> , 2015 , 27, 5641-5646	9.6	42
277	Direct atomic insight into the role of dopants in phase-change materials. <i>Nature Communications</i> , 2019 , 10, 3525	17.4	42
276	Function by defects at the atomic scale [New concepts for non-volatile memories. <i>Solid-State Electronics</i> , 2010 , 54, 830-840	1.7	42
275	Structural, optical and mechanical properties of aluminium nitride films prepared by reactive DC magnetron sputtering. <i>Thin Solid Films</i> , 2006 , 502, 235-239	2.2	42
274	Structural and optical properties of thin lead oxide films produced by reactive direct current magnetron sputtering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 2870	2.9	42

273	Quantification of the composition of alloy and oxide surfaces using low-energy ion scattering. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1994 , 12, 2308-2313	2.9	42
272	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
271	Characteristic Ordering in Liquid Phase-Change Materials. <i>Advanced Materials</i> , 2008 , 20, 4535-4540	24	41
270	Influence of doping upon the phase change characteristics of Ge ₂ Sb ₂ Te ₅ . <i>Microsystem Technologies</i> , 2006 , 13, 203-206	1.7	41
269	Relation between bandgap and resistance drift in amorphous phase change materials. <i>Scientific Reports</i> , 2015 , 5, 17362	4.9	40
268	Analysis of Transient Currents During Ultrafast Switching of TiO ₂ Nanocrossbar Devices. <i>IEEE Electron Device Letters</i> , 2011 , 32, 1116-1118	4.4	40
267	2D or Not 2D: Strain Tuning in Weakly Coupled Heterostructures. <i>Advanced Functional Materials</i> , 2018 , 28, 1705901	15.6	39
266	Modeling of laser pulsed heating and quenching in optical data storage media. <i>Journal of Applied Physics</i> , 1999 , 86, 1808-1816	2.5	39
265	Structural models for the Cu(100)O phase. <i>Surface Science</i> , 1989 , 224, L979-L982	1.8	39
264	The adsorption of sulfur, carbon monoxide and oxygen on NiAl(111). <i>Surface Science</i> , 1987 , 189-190, 438-447	1.8	39
263	Design Parameters for Phase-Change Materials for Nanostructure Resonance Tuning. <i>Advanced Optical Materials</i> , 2017 , 5, 1700261	8.1	38
262	A Review on Disorder-Driven Metal-Insulator Transition in Crystalline Vacancy-Rich GeSbTe Phase-Change Materials. <i>Materials</i> , 2017 , 10,	3.5	38
261	Optical and structural changes of silver nanoparticles during photochromic transformation. <i>Applied Physics Letters</i> , 2006 , 88, 011923	3.4	38
260	In situ measurements of thickness changes and mechanical stress upon gasochromic switching of thin MoO _x films. <i>Journal of Applied Physics</i> , 2004 , 95, 7632-7636	2.5	38
259	Characterization of Niobium Oxide Films Prepared by Reactive DC Magnetron Sputtering. <i>Physica Status Solidi A</i> , 2001 , 188, 1047-1058		38
258	Structure, growth, and magnetism of Mn on Cu(110). <i>Physical Review B</i> , 1998 , 57, 2607-2620	3.3	38
257	Advanced characterization tools for thin films in low-E systems. <i>Thin Solid Films</i> , 1999 , 351, 184-189	2.2	38
256	Low-Temperature Transport in Crystalline Ge ₁ Sb ₂ Te ₄ . <i>Advanced Functional Materials</i> , 2015 , 25, 6390-6396	3.6	37

255	Properties of TiOx coatings prepared by dc magnetron sputtering. <i>Physica Status Solidi A</i> , 2003 , 198, 224-237		37
254	Phase transitions in GaSb phase change alloys. <i>Physica Status Solidi (B): Basic Research</i> , 2012 , 249, 1999-2004		36
253	Strain-induced perpendicular magnetic anisotropy in ultrathin Ni films on Cu ₃ Au(0 0 1). <i>Journal of Magnetism and Magnetic Materials</i> , 1997 , 171, 16-28	2.8	36
252	Influence of Sn doping upon the phase change characteristics of Ge ₂ Sb ₂ Te ₅ . <i>Physica Status Solidi A</i> , 2004 , 201, 3087-3095		36
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