Stephen J Pennycook

List of Publications by Citations

839 papers	44,696 citations	107 h-index	181 g-index
873 ext. papers	51,000 ext. citations	9.8 avg, IF	7.58 L-index

#	Paper	IF	Citations
839	An oxygen reduction electrocatalyst based on carbon nanotube-graphene complexes. *Nature Nanotechnology*, **2012**, 7, 394-400	28.7	1407
838	Nanoscale nickel oxide/nickel heterostructures for active hydrogen evolution electrocatalysis. *Nature Communications*, **2014**, 5, 4695	17.4	1170
837	Atom-by-atom structural and chemical analysis by annular dark-field electron microscopy. *Nature*, **2010**, 464, 571-4	50.4	958
836	High-resolution Z-contrast imaging of crystals. *Ultramicroscopy*, **1991**, 37, 14-38	3.1	737
835	Dopamine as a carbon source: the controlled synthesis of hollow carbon spheres and yolk-structured carbon nanocomposites. *Angewandte Chemie - International Edition*, **2011**, 50, 6799-802	16.4	613
834	Colossal ionic conductivity at interfaces of epitaxial ZrO2:Y2O3/SrTiO3 heterostructures. *Science*, **2008**, 321, 676-80	33.3	576
833	Chemically sensitive structure-imaging with a scanning transmission electron microscope. *Nature*, **1988**, 336, 565-567	50.4	563
832	High-resolution incoherent imaging of crystals. *Physical Review Letters*, **1990**, 64, 938-941	7.4	523
831	ZnO Nanoneedles Grown Vertically on Si Substrates by Non-Catalytic Vapor-Phase Epitaxy. *Advanced Materials*, **2002**, 14, 1841-1843	24	491
830	Atomic-resolution chemical analysis using a scanning transmission electron microscope. *Nature*, **1993**, 366, 143-146	50.4	435
829	Direct sub-angstrom imaging of a crystal lattice. *Science*, **2004**, 305, 1741	33.3	426
828	Monolayer PtSe□a New Semiconducting Transition-Metal-Dichalcogenide, Epitaxially Grown by Direct Selenization of Pt. *Nano Letters*, **2015**, 15, 4013-8	11.5	420
827	Z-contrast stem for materials science. *Ultramicroscopy*, **1989**, 30, 58-69	3.1	419
826	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. *Nano Energy*, **2018**, 48, 73-80	17.1	418
825	Irradiation-free, columnar defects comprised of self-assembled nanodots and nanorods resulting in strongly enhanced flux-pinning in YBa2Cu3O7□ilms. *Superconductor Science and Technology*, **2005**, 18, 1533-1538	3.1	412
824	Band gap engineering and layer-by-layer mapping of selenium-doped molybdenum disulfide. *Nano Letters*, **2014**, 14, 442-9	11.5	378
823	Incoherent imaging using dynamically scattered coherent electrons. *Ultramicroscopy*, **1999**, 78, 111-124	3.1	369

822	Hollow Co O Nanosphere Embedded in Carbon Arrays for Stable and Flexible Solid-State Zinc-Air Batteries. *Advanced Materials*, **2017**, 29, 1704117	24	325
821	Quantum Confinement Observed in ZnO/ZnMgO Nanorod Heterostructures. *Advanced Materials*, **2003**, 15, 526-529	24	314
820	Ferroelectrics. Observation of a periodic array of flux-closure quadrants in strained ferroelectric PbTiO Films. *Science*, **2015**, 348, 547-51	33.3	308
819	The structural origin of enhanced piezoelectric performance and stability in lead free ceramics. *Energy and Environmental Science*, **2017**, 10, 528-537	35.4	305
818	Suppression of octahedral tilts and associated changes in electronic properties at epitaxial oxide heterostructure interfaces. *Physical Review Letters*, **2010**, 105, 087204	7.4	288
817	Defect Engineering of Oxygen-Deficient Manganese Oxide to Achieve High-Performing Aqueous Zinc Ion Battery. *Advanced Energy Materials*, **2019**, 9, 1803815	21.8	285
816	Time-resolved imaging of gas phase nanoparticle synthesis by laser ablation. *Applied Physics Letters*, **1998**, 72, 2987-2989	3.4	282
815	Observation of rare-earth segregation in silicon nitride ceramics at subnanometre dimensions. *Nature*, **2004**, 428, 730-3	50.4	264
814	Direct Imaging of the Atomic Configuration of Ultradispersed Catalysts. *Science*, **1996**, 274, 413-415	33.3	258
813	Enhanced tunnelling electroresistance effect due to a ferroelectrically induced phase transition at a magnetic complex oxide interface. *Nature Materials*, **2013**, 12, 397-402	27	256
812	Spectroscopic imaging of single atoms within a bulk solid. *Physical Review Letters*, **2004**, 92, 095502	7.4	253
811	Reversible Intercalation of Charged Iodine Chains into Carbon Nanotube Ropes. *Physical Review Letters*, **1998**, 80, 5560-5563	7.4	252
810	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zinc Air Battery Cathodes. *ACS Catalysis*, **2018**, 8, 8961-8969	13.1	250
809	Probing oxygen vacancy concentration and homogeneity in solid-oxide fuel-cell cathode materials on the subunit-cell level. *Nature Materials*, **2012**, 11, 888-94	27	243
808	Giant Piezoelectricity and High Curie Temperature in Nanostructured Alkali Niobate Lead-Free Piezoceramics through Phase Coexistence. *Journal of the American Chemical Society*, **2016**, 138, 15459-15464	16.4	241
807	Detection of single atoms and buried defects in three dimensions by aberration-corrected electron microscope with 0.5-A information limit. *Microscopy and Microanalysis*, **2008**, 14, 469-77	0.5	241
806	p-type doping of MoS2 thin films using Nb. *Applied Physics Letters*, **2014**, 104, 092104	3.4	236
805	Atomic-resolution imaging of oxidation states in manganites. *Physical Review B*, **2009**, 79,	3.3	236

804	Long-range ferromagnetic ordering in manganese-doped two-dimensional dichalcogenides. *Physical Review B*, **2013**, 88,	3.3	234
803	High thermoelectric performance in low-cost SnSSe crystals. *Science*, **2019**, 365, 1418-1424	33.3	233
802	Direct imaging of surface cusp evolution during strained-layer epitaxy and implications for strain relaxation. *Physical Review Letters*, **1993**, 71, 1744-1747	7.4	229
801	Catalytically active single-atom niobium in graphitic layers. *Nature Communications*, **2013**, 4, 1924	17.4	223
800	Grain-boundary-enhanced carrier collection in CdTe solar cells. *Physical Review Letters*, **2014**, 112, 156103	7.4	210
799	Cactus-Like NiCoP/NiCo-OH 3D Architecture with Tunable Composition for High-Performance Electrochemical Capacitors. *Advanced Functional Materials*, **2018**, 28, 1800036	15.6	206
798	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. *Nano Energy*, **2017**, 39, 162-171	17.1	202
797	Structural origin of reduced critical currents at YBa2Cu3O7 grain boundaries. *Nature*, **1991**, 351, 47-49	50.4	202
796	Atomic arrangement of iodine atoms inside single-walled carbon nanotubes. *Physical Review Letters* , **2000**, 84, 4621-4	7.4	200
795	Metal-organic framework derived hollow CoS nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. *Nanoscale Horizons*, **2017**, 2, 342-348	10.8	189
794	Direct determination of the chemical bonding of individual impurities in graphene. *Physical Review Letters*, **2012**, 109, 206803	7.4	189
793	Interface control of bulk ferroelectric polarization. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 9710-5	11.5	187
792	Synthesis, Surface Studies, Composition and Structural Characterization of CdSe, Core/Shell, and Biologically Active Nanocrystals. *Surface Science Reports*, **2007**, 62, 111-157	12.9	187
791	Structural basis for near unity quantum yield core/shell nanostructures. *Nano Letters*, **2006**, 6, 1496-501	11.5	187
790	Flexible metallic nanowires with self-adaptive contacts to semiconducting transition-metal dichalcogenide monolayers. *Nature Nanotechnology*, **2014**, 9, 436-42	28.7	185
789	Control of octahedral tilts and magnetic properties of perovskite oxide heterostructures by substrate symmetry. *Physical Review Letters*, **2010**, 105, 227203	7.4	184
788	Depth sectioning with the aberration-corrected scanning transmission electron microscope. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 3044-8	11.5	184
787	Three-dimensional imaging of individual hafnium atoms inside a semiconductor device. *Applied Physics Letters*, **2005**, 87, 034104	3.4	184

786	Hierarchically Imprinted Sorbents for the Separation of Metal Ions. *Journal of the American Chemical Society*, **2000**, 122, 992-993	16.4	183
785	Remarkable Roles of Cu To Synergistically Optimize Phonon and Carrier Transport in n-Type PbTe-CuTe. *Journal of the American Chemical Society*, **2017**, 139, 18732-18738	16.4	179
784	On the origin of the high coarsening resistance of □ plates in Al□Cu□Mg□Ag Alloys. *Acta Materialia*, **2001**, 49, 2827-2841	8.4	175
783	Atomically localized plasmon enhancement in monolayer graphene. *Nature Nanotechnology*, **2012**, 7, 161-5	28.7	173
782	Dopants adsorbed as single atoms prevent degradation of catalysts. *Nature Materials*, **2004**, 3, 143-6	27	172
781	Bonding arrangements at the Si-SiO2 and SiC-SiO2 interfaces and a possible origin of their contrasting properties. *Physical Review Letters*, **2000**, 84, 943-6	7.4	169
780	Copper Single Atoms Anchored in Porous Nitrogen-Doped Carbon as Efficient pH-Universal Catalysts for the Nitrogen Reduction Reaction. *ACS Catalysis*, **2019**, 9, 10166-10173	13.1	168
779	Direct Determination of Grain Boundary Atomic Structure in SrTiO3. *Science*, **1994**, 266, 102-4	33.3	168
778	Direct observation of the core structures of threading dislocations in GaN. *Applied Physics Letters*, **1998**, 72, 2680-2682	3.4	167
777	High-entropy-stabilized chalcogenides with high thermoelectric performance. *Science*, **2021**, 371, 830-834	33.3	167
776	Nonstoichiometry and the electrical activity of grain boundaries in SrTiO3. *Physical Review Letters*, **2001**, 86, 4056-9	7.4	165
775	Growth and relaxation mechanisms of YBa2Cu3O7□ films. *Physica C: Superconductivity and Its Applications*, **1992**, 202, 1-11	1.3	163
774	Decorating Co/CoNx nanoparticles in nitrogen-doped carbon nanoarrays for flexible and rechargeable zinc-air batteries. *Energy Storage Materials*, **2019**, 16, 243-250	19.4	157
773	Enhanced current transport at grain boundaries in high-T(c) superconductors. *Nature*, **2005**, 435, 475-8	50.4	157
772	Hydrogen and the Structure of the Transition Aluminas. *Journal of the American Chemical Society*, **1999**, 121, 7493-7499	16.4	156
771	Direct imaging of interfacial ordering in ultrathin (SimGen)p superlattices. *Physical Review Letters*, **1991**, 66, 750-753	7.4	154
770	Ultrathin Two-Dimensional Membranes Assembled by Ionic Covalent Organic Nanosheets with Reduced Apertures for Gas Separation. *Journal of the American Chemical Society*, **2020**, 142, 4472-4480	16.4	152
769	Ultrahigh Performance in Lead-Free Piezoceramics Utilizing a Relaxor Slush Polar State with Multiphase Coexistence. *Journal of the American Chemical Society*, **2019**, 141, 13987-13994	16.4	152

768	Self-Limiting Growth of Strained Faceted Islands. *Physical Review Letters*, **1998**, 80, 5156-5159	7.4	152
767	Reversible, nanometer-scale conductance transitions in an organic complex. *Physical Review Letters*, **2000**, 84, 1780-3	7.4	151
766	Atomically-thin Bi2MoO6 nanosheets with vacancy pairs for improved photocatalytic CO2 reduction. *Nano Energy*, **2019**, 61, 54-59	17.1	150
765	Thermal stability and catalytic activity of gold nanoparticles supported on silica. *Journal of Catalysis* , **2009**, 262, 92-101	7.3	150
764	Interactions of hydrogen with CeO(2). *Journal of the American Chemical Society*, **2001**, 123, 6609-11	16.4	147
763	ZnO Nanosheets Abundant in Oxygen Vacancies Derived from Metal-Organic Frameworks for ppb-Level Gas Sensing. *Advanced Materials*, **2019**, 31, e1807161	24	141
762	Morphological Evolution of Strained Films by Cooperative Nucleation. *Physical Review Letters*, **1996** , 77, 1330-1333	7.4	139
761	Coupling of superconductors through a half-metallic ferromagnet: Evidence for a long-range proximity effect. *Physical Review B*, **2004**, 69,	3.3	138
760	The atomic origins of reduced critical currents at [001] tilt grain boundaries in YBa2Cu3O7□ thin films. *Physica C: Superconductivity and Its Applications*, **1998**, 294, 183-193	1.3	137
759	Mapping octahedral tilts and polarization across a domain wall in BiFeO3 from Z-contrast scanning transmission electron microscopy image atomic column shape analysis. *ACS Nano*, **2010**, 4, 6071-9	16.7	135
758	Preparation and comparison of supported gold nanocatalysts on anatase, brookite, rutile, and P25 polymorphs of TiO2 for catalytic oxidation of CO. *Journal of Physical Chemistry B*, **2005**, 109, 10676-85	3.4	133
757	Subangstrom Resolution by Underfocused Incoherent Transmission Electron Microscopy. *Physical Review Letters*, **1998**, 81, 4156-4159	7.4	133
756	Chemically Exfoliated VSe Monolayers with Room-Temperature Ferromagnetism. *Advanced Materials*, **2019**, 31, e1903779	24	131
755	Dynamics of single-wall carbon nanotube synthesis by laser vaporization. *Applied Physics A: Materials Science and Processing*, **2000**, 70, 153-160	2.6	130
754	Realizing high performance n-type PbTe by synergistically optimizing effective mass and carrier mobility and suppressing bipolar thermal conductivity. *Energy and Environmental Science*, **2018**, 11, 2486-2495	35.4	129
753	Ni-Doped Cobalt□Cobalt Nitride Heterostructure Arrays for High-Power Supercapacitors. *ACS Energy Letters*, **2018**, 3, 2462-2469	20.1	129
752	Integrated Hierarchical Carbon Flake Arrays with Hollow P-Doped CoSe2 Nanoclusters as an Advanced Bifunctional Catalyst for Zn□Air Batteries. *Advanced Functional Materials*, **2018**, 28, 1804846	15.6	126
751	Insulating Ferromagnetic LaCoO3□Films: A Phase Induced by Ordering of Oxygen Vacancies. *Physical Review Letters*, **2014**, 112,	7.4	126

750	Kinetic Pathways to Strain Relaxation in the Si-Ge System. *MRS Bulletin*, **1996**, 21, 31-37	3.2	125
749	Conducting interfaces between band insulating oxides: The LaGaO3/SrTiO3 heterostructure. *Applied Physics Letters*, **2010**, 97, 152111	3.4	123
748	Nucleation of single-walled carbon nanotubes. *Physical Review Letters*, **2003**, 90, 145501	7.4	121
747	Electron transfer and ionic displacements at the origin of the 2D electron gas at the LAO/STO interface: direct measurements with atomic-column spatial resolution. *Advanced Materials*, **2012**, 24, 3952-7	24	119
746	Direct observation of a local thermal vibration anomaly in a quasicrystal. *Nature*, **2003**, 421, 347-50	50.4	119
745	Ultrasensitive 2D Bi O Se Phototransistors on Silicon Substrates. *Advanced Materials*, **2019**, 31, e1804945	24	119
744	Controlled Synthesis of CdS Nanoparticles inside Ordered Mesoporous Silica Using Ion-Exchange Reaction. *Journal of Physical Chemistry B*, **2001**, 105, 6755-6758	3.4	118
743	Extraordinary thermoelectric performance in n-type manganese doped Mg3Sb2 Zintl: High band degeneracy, tuned carrier scattering mechanism and hierarchical microstructure. *Nano Energy*, **2018**, 52, 246-255	17.1	117
742	The effect of interfacial layer properties on the performance of Hf-based gate stack devices. *Journal of Applied Physics*, **2006**, 100, 094108	2.5	117
741	Surfactant organic molecules restore magnetism in metal-oxide nanoparticle surfaces. *Nano Letters*, **2012**, 12, 2499-503	11.5	116
740	Correlated optical measurements and plasmon mapping of silver nanorods. *Nano Letters*, **2011**, 11, 3482-8	11.5	115
739	Topological defects: origin of nanopores and enhanced adsorption performance in nanoporous carbon. *Small*, **2012**, 8, 3283-8	11	113
738	AC/AB stacking boundaries in bilayer graphene. *Nano Letters*, **2013**, 13, 3262-8	11.5	112
737	Point defect configurations of supersaturated Au atoms inside Si nanowires. *Nano Letters*, **2008**, 8, 1016-9	11.5	111
736	Role of the nanoscale in catalytic CO oxidation by supported Au and Pt nanostructures. *Physical Review B*, **2007**, 76,	3.3	111
735	Quasicrystals as cluster aggregates. *Nature Materials*, **2004**, 3, 759-67	27	111
734	Determination of the ordered structures of Pb(Mg1/3Nb2/3)O3 and Ba(Mg1/3Nb2/3)O3 by atomic-resolution Z-contrast imaging. *Applied Physics Letters*, **1998**, 72, 3145-3147	3.4	109
733	Epitaxial Growth of Centimeter-Scale Single-Crystal MoS Monolayer on Au(111). *ACS Nano*, **2020**, 14, 5036-5045	16.7	107

732	Origin of colossal ionic conductivity in oxide multilayers: interface induced sublattice disorder. *Physical Review Letters*, **2010**, 104, 115901	7.4	106
731	Strain-driven oxygen deficiency in self-assembled, nanostructured, composite oxide films. *ACS Nano*, **2011**, 5, 4783-9	16.7	106
730	Direct imaging of nanoscale phase separation in La(0.55)Ca(0.45)MnO(3): relationship to colossal magnetoresistance. *Physical Review Letters*, **2009**, 103, 097202	7.4	106
729	Atomic engineering of high-density isolated Co atoms on graphene with proximal-atom controlled reaction selectivity. *Nature Communications*, **2018**, 9, 3197	17.4	105
728	Practical High Piezoelectricity in Barium Titanate Ceramics Utilizing Multiphase Convergence with Broad Structural Flexibility. *Journal of the American Chemical Society*, **2018**, 140, 15252-15260	16.4	105
727	Lattice mismatch accommodation via oxygen vacancy ordering in epitaxial La0.5Sr0.5CoO3-□thin films. *APL Materials*, **2013**, 1, 012105	5.7	104
726	In situ imaging and spectroscopy of single-wall carbon nanotube synthesis by laser vaporization. *Applied Physics Letters*, **2000**, 76, 182-184	3.4	104
725	Heterojunction engineering of MoSe2/MoS2 with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. *Chemical Engineering Journal*, **2019**, 359, 1419-1426	14.7	104
724	Direct observation of dislocation dissociation and Suzuki segregation in a Mg□nY alloy by aberration-corrected scanning transmission electron microscopy. *Acta Materialia*, **2013**, 61, 350-359	8.4	103
723	Crown ethers in graphene. *Nature Communications*, **2014**, 5, 5389	17.4	102
722	"Charge leakage" at LaMnO3/SrTiO3 interfaces. *Advanced Materials*, **2010**, 22, 627-32	24	102
721	Nonstoichiometric dislocation cores in alpha-alumina. *Science*, **2007**, 316, 82-5	33.3	101
720	Three-dimensional ADF imaging of individual atoms by through-focal series scanning transmission electron microscopy. *Ultramicroscopy*, **2006**, 106, 1062-8	3.1	100
719	Entropy Engineering of SnTe: Multi-Principal-Element Alloying Leading to Ultralow Lattice Thermal Conductivity and State-of-the-Art Thermoelectric Performance. *Advanced Energy Materials*, **2018**, 8, 1802116	21.8	100
718	Molecular-Beam Epitaxy of Two-Dimensional InSe and Its Giant Electroresistance Switching in Ferroresistive Memory Junction. *Nano Letters*, **2018**, 18, 6340-6346	11.5	100
717	Elemental mapping with elastically scattered electrons. *Journal of Microscopy*, **1986**, 144, 229-249	1.9	99
716	Platinum-modulated cobalt nanocatalysts for low-temperature aqueous-phase Fischer-Tropsch synthesis. *Journal of the American Chemical Society*, **2013**, 135, 4149-58	16.4	98
715	Impurity-Induced Structural Transformation of a MgO Grain Boundary. *Physical Review Letters*, **1998**, 81, 3675-3678	7.4	98

714	Epitaxial Ferroelectric Hf0.5Zr0.5O2 Thin Films and Their Implementations in Memristors for Brain-Inspired Computing. *Advanced Functional Materials*, **2018**, 28, 1806037	15.6	98
713	Thermoelectric SnTe with Band Convergence, Dense Dislocations, and Interstitials through Sn Self-Compensation and Mn Alloying. *Small*, **2018**, 14, e1802615	11	96
712	Single-Atom Coated Separator for Robust Lithium-Sulfur Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 25147-25154	9.5	95
711	Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Zn–Air Battery and Self-Driven Water Splitting. *Advanced Energy Materials*, **2020**, 10, 2002896	21.8	95
710	Interplay of octahedral tilts and polar order in BiFeO3 films. *Advanced Materials*, **2013**, 25, 2497-504	24	94
709	Synergizing Mo Single Atoms and Mo C Nanoparticles on CNTs Synchronizes Selectivity and Activity of Electrocatalytic N Reduction to Ammonia. *Advanced Materials*, **2020**, 32, e2002177	24	93
708	Z-Contrast Transmission Electron Microscopy: Direct Atomic Imaging of Materials. *Annual Review of Materials Research*, **1992**, 22, 171-195		93
707	Photoluminescence from gas-suspended SiOx nanoparticles synthesized by laser ablation. *Applied Physics Letters*, **1998**, 73, 438-440	3.4	92
706	Atomic-resolution electron energy loss spectroscopy imaging in aberration corrected scanning transmission electron microscopy. *Physical Review Letters*, **2003**, 91, 105503	7.4	92
705	Atomic structure of the quasicrystal Al72Ni20Co8. *Nature*, **2000**, 403, 266-7	50.4	91
704	Realizing High Thermoelectric Performance in p-Type SnSe through Crystal Structure Modification. *Journal of the American Chemical Society*, **2019**, 141, 1141-1149	16.4	91
703	Ultrathin nickel boron oxide nanosheets assembled vertically on graphene: a new hybrid 2D material for enhanced photo/electro-catalysis. *Materials Horizons*, **2017**, 4, 885-894	14.4	90
702	Simultaneously enhancing the power factor and reducing the thermal conductivity of SnTe via introducing its analogues. *Energy and Environmental Science*, **2017**, 10, 2420-2431	35.4	89
701	Enhancement of flux pinning in YBa2Cu3O7 thin films embedded with epitaxially grown Y2O3nanostructures using a multi-layering process. *Superconductor Science and Technology*, **2005**, 18, 1502-1505	3.1	89
700	Potential-Dependent Phase Transition and Mo-Enriched Surface Reconstruction of CoOOH in a Heterostructured Co-Mo2C Precatalyst Enable Water Oxidation. *ACS Catalysis*, **2020**, 10, 4411-4419	13.1	88
699	Single-crystal organic nanowires of copper-tetracyanoquinodimethane: synthesis, patterning, characterization, and device applications. *Angewandte Chemie - International Edition*, **2007**, 46, 2650-4	16.4	88
698	Nano-Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. *Angewandte Chemie - International Edition*, **2019**, 58, 15076-15081	16.4	87
697	Direct visualization of reversible dynamics in a Si cluster embedded in a graphene pore. *Nature Communications*, **2013**, 4, 1650	17.4	87

696	Accurate structure determination from image reconstruction in ADF STEM. *Journal of Microscopy*, **1998**, 190, 159-170	1.9	87
695	Influence of defects on structural and magnetic properties of multifunctional La2NiMnO6 thin films. *Physical Review B*, **2008**, 77,	3.3	87
694	Structure and Chemistry of Yttria-Stabilized Cubic-Zirconia Symmetric Tilt Grain Boundaries. *Journal of the American Ceramic Society*, **2004**, 84, 1361-1368	3.8	87
693	Direct Observation of Dislocation Core Structures in CdTe/GaAs(001). *Science*, **1995**, 269, 519-21	33.3	86
692	Interdiffusion, growth mechanisms, and critical currents in YBa2Cu3O7-x/PrBa2Cu3O7-x superlattices. *Physical Review Letters*, **1991**, 67, 765-768	7.4	86
691	Gigahertz Dielectric Polarization of Substitutional Single Niobium Atoms in Defective Graphitic Layers. *Physical Review Letters*, **2015**, 115, 147601	7.4	85
690	Direct Imaging of Local Chemical Disorder and Columnar Vacancies in Ideal Decagonal Al-Ni-Co Quasicrystals. *Physical Review Letters*, **1998**, 81, 5145-5148	7.4	84
689	Structure and ultrafast dynamics of white-light-emitting CdSe nanocrystals. *Journal of the American Chemical Society*, **2009**, 131, 5730-1	16.4	83
688	Direct experimental determination of the atomic structure at internal interfaces. *Journal Physics D: Applied Physics*, **1996**, 29, 1779-1798	3	83
687	Nanoparticles of gold on Al2O3 produced by dc magnetron sputtering. *Journal of Catalysis*, **2005**, 231, 151-158	7.3	83
686	New model for damage accumulation in Si during self-ion irradiation. *Applied Physics Letters*, **1989**, 55, 2503-2505	3.4	83
685	Visible and Near-Infrared Photothermal Catalyzed Hydrogenation of Gaseous CO over Nanostructured Pd@NbO. *Advanced Science*, **2016**, 3, 1600189	13.6	82
684	Dynamic fluctuations in ultrasmall nanocrystals induce white light emission. *Nano Letters*, **2012**, 12, 3038-42	11.5	82
683	Atomic-resolution imaging of spin-state superlattices in nanopockets within cobaltite thin films. *Nano Letters*, **2011**, 11, 973-6	11.5	82
682	Metal-organic framework-derived hierarchical MoS2/CoS2 nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. *Journal of Materials Chemistry A*, **2019**, 7, 13339-13346	13	81
681	Three-dimensional location of a single dopant with atomic precision by aberration-corrected scanning transmission electron microscopy. *Nano Letters*, **2014**, 14, 1903-8	11.5	80
680	Surface reconstruction and the difference in surface acidity between gamma- and eta-alumina. *Journal of the American Chemical Society*, **2001**, 123, 26-9	16.4	80
679	The influence of atomic structure on the formation of electrical barriers at grain boundaries in SrTiO3. *Applied Physics Letters*, **1999**, 74, 2638-2640	3.4	80

678	Observation of cathodoluminescence at single dislocations by STEM. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1980**, 41, 589-600		79
677	2D Transition Metal Dichalcogenide: Unraveling High-Yield Phase-Transition Dynamics in Transition Metal Dichalcogenides on Metallic Substrates (Adv. Sci. 7/2019). *Advanced Science*, **2019**, 6, 1970042	13.6	78
676	Conformal dispersed cobalt nanoparticles in hollow carbon nanotube arrays for flexible Zn-air and Al-air batteries. *Chemical Engineering Journal*, **2019**, 369, 988-995	14.7	77
675	Dopamine as a Carbon Source: The Controlled Synthesis of Hollow Carbon Spheres and Yolk-Structured Carbon Nanocomposites. *Angewandte Chemie*, **2011**, 123, 6931-6934	3.6	77
674	Phase Diagram and Superconducting Dome of Infinite-Layer Nd_{1-x}Sr_{x}NiO_{2} Thin Films. *Physical Review Letters*, **2020**, 125, 147003	7.4	77
673	Point Defects and Localized Excitons in 2D WSe. *ACS Nano*, **2019**, 13, 6050-6059	16.7	76
672	Engineering Local and Global Structures of Single Co Atoms for a Superior Oxygen Reduction Reaction. *ACS Catalysis*, **2020**, 10, 5862-5870	13.1	76
671	Mo-Terminated Edge Reconstructions in Nanoporous Molybdenum Disulfide Film. *Nano Letters*, **2018**, 18, 482-490	11.5	76
670	Direct observation of dopant atom diffusion in a bulk semiconductor crystal enhanced by a large size mismatch. *Physical Review Letters*, **2014**, 113, 155501	7.4	76
669	Aberration-corrected scanning transmission electron microscopy: from atomic imaging and analysis to solving energy problems. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2009**, 367, 3709-33	3	76
668	Materials Advances through Aberration-Corrected Electron Microscopy. *MRS Bulletin*, **2006**, 31, 36-43	3.2	76
667	Band Edge Recombination in CdSe, CdS and CdSxSe1Alloy Nanocrystals Observed by Ultrafast Fluorescence Upconversion: The Effect of Surface Trap States. *Journal of Physical Chemistry C*, **2008**, 112, 12736-12746	3.8	74
666	Electronic and magnetic reconstructions in La0.7Sr0.3MnO3/SrTiO3 heterostructures: a case of enhanced interlayer coupling controlled by the interface. *Physical Review Letters*, **2011**, 106, 147205	7.4	73
665	Atomic Column Resolved Electron Energy-Loss Spectroscopy. *Physica Status Solidi A*, **1998**, 166, 327-342		73
664	Atomically resolved mapping of polarization and electric fields across ferroelectric/oxide interfaces by Z-contrast imaging. *Advanced Materials*, **2011**, 23, 2474-9	24	72
663	s-Electron ferromagnetism in gold and silver nanoclusters. *Nano Letters*, **2007**, 7, 3134-7	11.5	72
662	Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in -Type PbS. *Journal of the American Chemical Society*, **2020**, 142, 4051-4060	16.4	71
661	Critical nuclei shapes in the stress-driven 2D-to-3D transition. *Physical Review B*, **1997**, 56, R1700-R1703	3.3	71

660	In Situ Observation of Oxygen Vacancy Dynamics and Ordering in the Epitaxial LaCoO System. *ACS Nano*, **2017**, 11, 6942-6949	16.7	70
659	Prominent electrochromism through vacancy-order melting in a complex oxide. *Nature Communications*, **2012**, 3, 799	17.4	69
658	Epitaxial stabilization of Fe2O3 (00l) thin films on SrTiO3 (111). *Applied Physics Letters*, **2010**, 96, 112508	3.4	69
657	Excitonic effects in core-excitation spectra of semiconductors. *Physical Review Letters*, **2000**, 85, 2168-71	7.4	69
656	Engineering covalently bonded 2D layered materials by self-intercalation. *Nature*, **2020**, 581, 171-177	50.4	68
655	HAADF-STEM imaging with sub-angstrom probes: a full Bloch wave analysis. *Journal of Electron Microscopy*, **2004**, 53, 257-66		68
654	Nanoscale analysis of YBa2Cu3O7/La0.67Ca0.33MnO3 interfaces. *Solid-State Electronics*, **2003**, 47, 2245-2248	1.7	68
653	Spatial resolution, information limit, and contrast transfer in piezoresponse force microscopy. *Nanotechnology*, **2006**, 17, 3400-11	3.4	67
652	Crack-like sources of dislocation nucleation and multiplication in thin films. *Science*, **1995**, 268, 1161-3	33.3	67
651	Direct measurements of the velocity and thickness of explosively propagating buried molten layers in amorphous silicon. *Applied Physics Letters*, **1986**, 48, 1389-1391	3.4	67
650	A new class of room-temperature multiferroic thin films with bismuth-based supercell structure. *Advanced Materials*, **2013**, 25, 1028-32	24	66
649	High Angle Dark Field STEM for Advanced Materials. *Journal of Electron Microscopy*, **1996**, 45, 36-43		66
648	Detection of nitrogen at {100} platelets in diamond. *Nature*, **1982**, 298, 635-637	50.4	66
647	Quantitative annular dark field electron microscopy using single electron signals. *Microscopy and Microanalysis*, **2014**, 20, 99-110	0.5	65
646	From atomic structure to photovoltaic properties in CdTe solar cells. *Ultramicroscopy*, **2013**, 134, 113-125	3.1	65
645	Single Pd atoms in activated carbon fibers and their contribution to hydrogen storage. *Carbon*, **2011**, 49, 4050-4058	10.4	65
644	Atomic Configurations and Energetics of Arsenic Impurities in a Silicon Grain Boundary. *Physical Review Letters*, **1998**, 81, 132-135	7.4	65
643	Efficient Hydrogen Evolution of Oxidized Ni-N Defective Sites for Alkaline Freshwater and Seawater Electrolysis. *Advanced Materials*, **2021**, 33, e2003846	24	65

642	Current-induced magnetization switching in all-oxide heterostructures. *Nature Nanotechnology*, **2019**, 14, 939-944	28.7	64
641	Heterogeneous Single Atom Electrocatalysis, Where Singles Are Married. *Advanced Energy Materials*, **2020**, 10, 1903181	21.8	64
640	Direct experimental observation of the local electronic structure at threading dislocations in metalorganic vapor phase epitaxy grown wurtzite GaN thin films. *Applied Physics Letters*, **2000**, 76, 466-468	3.4	64
639	Polytypoid structures in annealed In2O3ZnO films. *Applied Physics Letters*, **1998**, 73, 2585-2587	3.4	64
638	Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through alloying CdSe. *Energy and Environmental Science*, **2019**, 12, 1969-1978	35.4	63
637	Depth sectioning of aligned crystals with the aberration-corrected scanning transmission electron microscope. *Journal of Electron Microscopy*, **2006**, 55, 7-12		63
636	Modification of Vapor Phase Concentrations in MoS Growth Using a NiO Foam Barrier. *ACS Nano*, **2018**, 12, 1339-1349	16.7	62
635	Ultrasmall tungsten carbide catalysts stabilized in graphitic layers for high-performance oxygen reduction reaction. *Nano Energy*, **2016**, 28, 261-268	17.1	62
634	Interpreting atomic-resolution spectroscopic images. *Physical Review B*, **2007**, 76,	3.3	62
633	Selective nontemplated adsorption of organic molecules on nanofacets and the role of bonding patterns. *Physical Review Letters*, **2006**, 97, 156105	7.4	62
632	Dopant Segregation at Semiconductor Grain Boundaries through Cooperative Chemical Rebonding. *Physical Review Letters*, **1996**, 77, 1306-1309	7.4	62
631	Stabilization of graphene nanopore. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 7522-6	11.5	61
630	Atomic-resolution spectroscopic imaging: past, present and future. *Journal of Electron Microscopy*, **2009**, 58, 87-97		61
629	Orbital-occupancy versus charge ordering and the strength of electron correlations in electron-doped CaMnO3. *Physical Review Letters*, **2007**, 99, 036402	7.4	61
628	Z-Contrast Scanning Transmission Electron Microscopy **1999**, 161-207		61
627	Interface structure and non-stoichiometry in HfO2 dielectrics. *Applied Physics Letters*, **2004**, 85, 672-674	3.4	60
626	Origin of anomalous Pt-Pt distances in the Pt/alumina catalytic system. *ChemPhysChem*, **2004**, 5, 1893-7	3.2	60
625	Atomic structure of Ba0.5Sr0.5TiO3 thin films on LaAlO3. *Applied Physics Letters*, **1999**, 75, 2542-2544	3.4	60

624	Depression and broadening of the superconducting transition in superlattices based on YBa2Cu3O7- delta : Influence of the barrier layers. *Physical Review Letters*, **1991**, 67, 1358-1361	7.4	60
623	Electronic excitations in graphene in the 1-50 eV range: the □and □+ □peaks are not plasmons. *Nano Letters*, **2014**, 14, 3827-31	11.5	58
622	Direct Imaging of Cl- and Cu-Induced Short-Circuit Efficiency Changes in CdTe Solar Cells. *Advanced Energy Materials*, **2014**, 4, 1400454	21.8	58
621	Column-by-column compositional mapping by Z-contrast imaging. *Ultramicroscopy*, **2009**, 109, 172-6	3.1	58
620	THE BULK AND SURFACE STRUCTURE OF □ALUMINA. *Chemical Engineering Communications*, **2000**, 181, 107-135	2.2	58
619	The atomic structure of asymmetric [001] tilt boundaries in SrTiO3. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1996**, 73, 625-641		58
618	Controlled Growth and Thickness-Dependent Conduction-Type Transition of 2D Ferrimagnetic Cr S Semiconductors. *Advanced Materials*, **2020**, 32, e1905896	24	58
617	Role of interfacial transition layers in VO2/Al2O3 heterostructures. *Journal of Applied Physics*, **2011**, 110, 073515	2.5	57
616	The spatial resolution of imaging using core-loss spectroscopy in the scanning transmission electron microscope. *Ultramicroscopy*, **2005**, 102, 317-26	3.1	57
615	Core-hole effects on energy-loss near-edge structure. *Ultramicroscopy*, **2001**, 86, 355-62	3.1	57
614	Explanation of the Observed Dearth of Three-Coordinated Al on □Alumina Surfaces. *Journal of the American Chemical Society*, **1999**, 121, 10999-11001	16.4	57
613	Phase-controllable growth of ultrathin 2D magnetic FeTe crystals. *Nature Communications*, **2020**, 11, 3729	17.4	57
612	In-depth analysis of chloride treatments for thin-film CdTe solar cells. *Nature Communications*, **2016** , 7, 13231	17.4	56
611	Single-Molecule Surface-Enhanced Raman Scattering: Can STEM/EELS Image Electromagnetic Hot Spots?. *Journal of Physical Chemistry Letters*, **2012**, 3, 2303-9	6.4	56
610	Defect-mediated ferromagnetism in insulating Co-doped anatase TiO2 thin films. *Physical Review B*, **2008**, 78,	3.3	56
609	Magnetron sputtering of gold nanoparticles onto WO3 and activated carbon. *Catalysis Today*, **2007**, 122, 248-253	5.3	56
608	Local valence and magnetic characteristics of La2NiMnO6. *Physical Review B*, **2009**, 79,	3.3	55
607	Aberration-Corrected Z-Contrast Scanning Transmission Electron Microscopy of CdSe Nanocrystals. *Nano Letters*, **2004**, 4, 1279-1283	11.5	55

606	Growth of Nb-Doped Monolayer WS by Liquid-Phase Precursor Mixing. *ACS Nano*, **2019**, 13, 10768-10775	16.7	54
605	Metal□rganic framework-derived integrated nanoarrays for overall water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 9009-9018	13	54
604	Reversible electric-field control of magnetization at oxide interfaces. *Nature Communications*, **2014**, 5, 4215	17.4	54
603	Single atom microscopy. *Microscopy and Microanalysis*, **2012**, 18, 1342-54	0.5	54
602	The mechanism for polarity inversion of GaN via a thin AlN layer: Direct experimental evidence. *Applied Physics Letters*, **2007**, 91, 203115	3.4	54
601	Direct Imaging of Atomic Ordering in Undoped and La-Doped Pb(Mg1/3Nb2/3)O3. *Journal of the American Ceramic Society*, **2000**, 83, 181-88	3.8	54
600	On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal-Organic Framework Films. *Angewandte Chemie - International Edition*, **2019**, 58, 14089-14094	16.4	53
599	Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision. *Small*, **2015**, 11, 5895-900	11	53
598	Thin dielectric film thickness determination by advanced transmission electron microscopy. *Microscopy and Microanalysis*, **2003**, 9, 493-508	0.5	53
597	Step-driven lateral segregation and long-range ordering during SixGe1-x epitaxial growth. *Physical Review Letters*, **1992**, 68, 2062-2065	7.4	53
596	Intrinsically Low Thermal Conductivity in BiSbSe3: A Promising Thermoelectric Material with Multiple Conduction Bands. *Advanced Functional Materials*, **2019**, 29, 1806558	15.6	53
595	Defect-mediated polarization switching in ferroelectrics and related materials: from mesoscopic mechanisms to atomistic control. *Advanced Materials*, **2010**, 22, 314-22	24	52
594	Selective Patterned Growth of Single-Crystal Ag□TCNQ Nanowires for Devices by Vapor□Solid Chemical Reaction. *Advanced Functional Materials*, **2008**, 18, 3043-3048	15.6	52
593	Localization in elastic and inelastic scattering. *Ultramicroscopy*, **2003**, 96, 313-22	3.1	52
592	Atomically-precise dopant-controlled single cluster catalysis for electrochemical nitrogen reduction. *Nature Communications*, **2020**, 11, 4389	17.4	52
591	Ultrahigh Average Realized in p-Type SnSe Crystalline Thermoelectrics through Producing Extrinsic Vacancies. *Journal of the American Chemical Society*, **2020**, 142, 5901-5909	16.4	51
590	Watching domains grow: In-situ studies of polarization switching by combined scanning probe and scanning transmission electron microscopy. *Journal of Applied Physics*, **2011**, 110, 052014	2.5	51
589	Investigation of the evolution of single domain (111)B CdTe films by molecular beam epitaxy on miscut (001)Si substrate. *Journal of Applied Physics*, **1998**, 84, 4292-4299	2.5	51

588	Synergistic Compositional Mechanical Thermal Effects Leading to a Record High zT in n-Type V2VI3 Alloys Through Progressive Hot Deformation. *Advanced Functional Materials*, **2018**, 28, 1803617	15.6	50
587	Interface dipole between two metallic oxides caused by localized oxygen vacancies. *Physical Review B*, **2012**, 86,	3.3	50
586	Large-scale ab initio study of the binding and diffusion of a Ge adatom on the Si(100) surface. *Physical Review B*, **1994**, 50, 2663-2666	3.3	50
585	Solidification of highly undercooled liquid silicon produced by pulsed laser melting of ion-implanted amorphous silicon: Time-resolved and microstructural studies. *Journal of Materials Research*, **1987**, 2, 648-680	2.5	50
584	(Ni,Co)Se /NiCo-LDH Core/Shell Structural Electrode with the Cactus-Like (Ni,Co)Se Core for Asymmetric Supercapacitors. *Small*, **2019**, 15, e1803895	11	50
583	Seeing the atoms more clearly: STEM imaging from the Crewe era to today. *Ultramicroscopy*, **2012**, 123, 28-37	3.1	49
582	Seeing oxygen disorder in YSZ/SrTiO3colossal ionic conductor heterostructures using EELS. *EPJ Applied Physics*, **2011**, 54, 33507	1.1	49
581	Effect of oxygen concentration on the magnetic properties of La2CoMnO6 thin films. *Applied Physics Letters*, **2007**, 91, 202509	3.4	49
580	Interplay between evolving surface morphology, atomic-scale growth modes, and ordering during SixGe1-x epitaxy. *Physical Review Letters*, **1993**, 70, 2293-2296	7.4	49
579	Atom location by axial-electron-channeling analysis. *Physical Review Letters*, **1985**, 54, 1543-1546	7.4	49
578	Tailoring disorder and dimensionality: strategies for improved solid oxide fuel cell electrolytes. *ChemPhysChem*, **2009**, 10, 1003-11	3.2	48
577	Photoluminescence Upconversion by Defects in Hexagonal Boron Nitride. *Nano Letters*, **2018**, 18, 6898-6905	11.5	48
576	Insights into the physical chemistry of materials from advances in HAADF-STEM. *Physical Chemistry Chemical Physics*, **2015**, 17, 3982-4006	3.6	47
575	Condensed phase growth of single-wall carbon nanotubes from laser annealed nanoparticulates. *Applied Physics Letters*, **2001**, 78, 3307-3309	3.4	47
574	Microstructure and properties of YBa2Cu3O9 superconductors with transitions at 90 and near 290 K. *Applied Physics Letters*, **1987**, 51, 940-942	3.4	47
573	Homoepitaxial Growth of Large-Scale Highly Organized Transition Metal Dichalcogenide Patterns. *Advanced Materials*, **2018**, 30, 1704674	24	47
572	Atom-by-Atom Fabrication of Monolayer Molybdenum Membranes. *Advanced Materials*, **2018**, 30, e1707281	24	46
571	Oxygen-vacancy-induced polar behavior in (LaFeO3)2/(SrFeO3) superlattices. *Nano Letters*, **2014**, 14, 2694-701	11.5	45

570	Comment on "Colossal ionic conductivity at interfaces of epitaxial ZrO2:Y2O3/SrTiO3 heterostructures". *Science*, **2009**, 324, 465; author reply 465	33.3	45
569	Self-organized bimetallic Ag-Co nanoparticles with tunable localized surface plasmons showing high environmental stability and sensitivity. *Nanotechnology*, **2012**, 23, 275604	3.4	45
568	Rare-earth adsorption at intergranular interfaces in silicon nitride ceramics: Subnanometer observations and theory. *Physical Review B*, **2005**, 72,	3.3	45
567	Differentiating Polymorphs in Molybdenum Disulfide via Electron Microscopy. *Advanced Materials*, **2018**, 30, e1802397	24	45
566	Twinned Tungsten Carbonitride Nanocrystals Boost Hydrogen Evolution Activity and Stability. *Small*, **2019**, 15, e1900248	11	44
565	Molecular Beam Epitaxy of Highly Crystalline MoSe on Hexagonal Boron Nitride. *ACS Nano*, **2018**, 12, 7562-7570	16.7	44
564	Physics of grain boundaries in polycrystalline photovoltaic semiconductors. *Journal of Applied Physics*, **2015**, 117, 112807	2.5	44
563	Vacancy-driven anisotropic defect distribution in the battery-cathode material LiFePO4. *Physical Review Letters*, **2011**, 107, 085507	7.4	44
562	Transient-Enhanced Diffusion during Furnace and Rapid Thermal Annealing of Ion-Implanted Silicon. *Journal of the Electrochemical Society*, **1985**, 132, 1962-1968	3.9	43
561	Strain stabilized nickel hydroxide nanoribbons for efficient water splitting. *Energy and Environmental Science*, **2020**, 13, 229-237	35.4	43
560	Z-contrast imaging and electron energy-loss spectroscopy analysis of chromium-doped diamond-like carbon films. *Applied Physics Letters*, **1999**, 75, 2740-2742	3.4	42
559	The effects of both deviation from stoichiometry and boron on grain boundaries in Ni3Al. *The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties*, **1990**, 62, 659-676		42
558	Study of single-electron excitations by electron microscopy II. Cathodoluminescence image contrast from localized energy transfers. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1980**, 41, 809-827		42
557	Optically transparent, mechanically durable, nanostructured superhydrophobic surfaces enabled by spinodally phase-separated glass thin films. *Nanotechnology*, **2013**, 24, 315602	3.4	41
556	Large-angle illumination STEM: toward three-dimensional atom-by-atom imaging. *Ultramicroscopy*, **2015**, 151, 122-129	3.1	40
555	STEM-EELS imaging of complex oxides and interfaces. *MRS Bulletin*, **2012**, 37, 29-35	3.2	40
554	Chemical ordering in Al(72)Ni(20)Co(8) decagonal quasicrystals. *Physical Review Letters*, **2001**, 86, 1542-5	7.4	40
553	Edge Segregated Polymorphism in 2D Molybdenum Carbide. *Advanced Materials*, **2019**, 31, e1808343	24	40

552	Magnetic "dead" layer at a complex oxide interface. *Physical Review Letters*, **2008**, 101, 247204	7.4	39
551	High resolution electron microscopy and microanalysis. *Contemporary Physics*, **1982**, 23, 371-400	3.3	39
550	Stable single-atom platinum catalyst trapped in carbon onion graphitic shells for improved chemoselective hydrogenation of nitroarenes. *Carbon*, **2019**, 143, 378-384	10.4	39
549	Z-contrast imaging of dislocation cores at the GaAs/Si interface. *Applied Physics Letters*, **2002**, 81, 2728-2730	3.4	38
548	Low-temperature epitaxy of Si and Ge by direct ion beam deposition. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1987**, 5, 2135-2139	2.9	38
547	Direct imaging of dopant distributions in silicon by scanning transmission electron microscopy. *Applied Physics Letters*, **1984**, 45, 385-387	3.4	38
546	Flexible and Wearable All-Solid-State Al-Air Battery Based on Iron Carbide Encapsulated in Electrospun Porous Carbon Nanofibers. *ACS Applied Materials & Interfaces*, **2019**, 11, 1988-1995	9.5	38
545	Printable two-dimensional superconducting monolayers. *Nature Materials*, **2021**, 20, 181-187	27	38
544	Atomically Dispersed Indium Sites for Selective CO Electroreduction to Formic Acid. *ACS Nano*, **2021**, 15, 5671-5678	16.7	38
543	The impact of STEM aberration correction on materials science. *Ultramicroscopy*, **2017**, 180, 22-33	3.1	37
542	Strong Charge Transfer at 2H-1T Phase Boundary of MoS for Superb High-Performance Energy Storage. *Small*, **2019**, 15, e1900131	11	37
541	Strain Modulation by van der Waals Coupling in Bilayer Transition Metal Dichalcogenide. *ACS Nano*, **2018**, 12, 1940-1948	16.7	37
540	Carrier separation at dislocation pairs in CdTe. *Physical Review Letters*, **2013**, 111, 096403	7.4	37
539	Modern approaches to studying gas adsorption in nanoporous carbons. *Journal of Materials Chemistry A*, **2013**, 1, 9341	13	37
538	Depth sectioning in scanning transmission electron microscopy based on core-loss spectroscopy. *Ultramicroscopy*, **2007**, 108, 17-28	3.1	37
537	High-performance potassium sodium niobate piezoceramics for ultrasonic transducer. *Nano Energy*, **2020**, 70, 104559	17.1	37
536	The possibility and implications of dynamic nanoparticle surfaces. *ACS Nano*, **2013**, 7, 8358-65	16.7	36
535	Characterizing the two- and three-dimensional resolution of an improved aberration-corrected STEM. *Microscopy and Microanalysis*, **2009**, 15, 441-53	0.5	36

534	Three-dimensional scanning transmission electron microscopy of biological specimens. *Microscopy and Microanalysis*, **2010**, 16, 54-63	0.5	36
533	Molecular structure of vapor-deposited amorphous selenium. *Journal of Applied Physics*, **2016**, 120, 135101	2.5	36
532	Aberration measurement using the Ronchigram contrast transfer function. *Ultramicroscopy*, **2010**, 110, 891-8	3.1	35
531	Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in n-Type AgnPb100InnTe100+2n (LIST). *Advanced Energy Materials*, **2019**, 9, 1900414	21.8	34
530	Atomic structure of luminescent centers in high-efficiency Ce-doped w-AlN single crystal. *Scientific Reports*, **2014**, 4, 3778	4.9	34
529	First-principles study of rare earth adsorption at □Si3N4 interfaces. *Physical Review B*, **2008**, 78,	3.3	34
528	Step Instabilities: A New Kinetic Route to 3D Growth. *Physical Review Letters*, **1995**, 75, 1582-1585	7.4	34
527	Giant piezoelectricity in oxide thin films with nanopillar structure. *Science*, **2020**, 369, 292-297	33.3	34
526	Emerging Diluted Ferromagnetism in High- Superconductors Driven by Point Defect Clusters. *Advanced Science*, **2016**, 3, 1500295	13.6	34
525	In-situ characterization by Near-Ambient Pressure XPS of the catalytically active phase of Pt/Al2O3 during NO and CO oxidation. *Applied Catalysis B: Environmental*, **2018**, 220, 506-511	21.8	33
524	Modelling imaging based on core-loss spectroscopy in scanning transmission electron microscopy. *Ultramicroscopy*, **2005**, 104, 126-40	3.1	33
523	Point defect trapping in solid-phase epitaxially grown silicon-antimony alloys. *Journal of Applied Physics*, **1984**, 55, 837-840	2.5	33
522	Soft X-Ray Imaging and Spectromicroscopy745-791		33
521	Enhanced Valley Zeeman Splitting in Fe-Doped Monolayer MoS. *ACS Nano*, **2020**, 14, 4636-4645	16.7	32
520	Bulk Spin Torque-Driven Perpendicular Magnetization Switching in L1 FePt Single Layer. *Advanced Materials*, **2020**, 32, e2002607	24	32
519	Localization of inelastic electron scattering in the low-loss energy regime. *Ultramicroscopy*, **2012**, 119, 51-6	3.1	32
518	Single-Atom Tungsten-Doped CoP Nanoarrays as a High-Efficiency pH-Universal Catalyst for Hydrogen Evolution Reaction. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 14825-14832	8.3	32
517	Symmetry-dependent field-free switching of perpendicular magnetization. *Nature Nanotechnology*, **2021**, 16, 277-282	28.7	32

516	Paving the way to nanoionics: atomic origin of barriers for ionic transport through interfaces. *Scientific Reports*, **2015**, 5, 17229	4.9	31
515	Direct observation of atomic dynamics and silicon doping at a topological defect in graphene. *Angewandte Chemie - International Edition*, **2014**, 53, 8908-12	16.4	31
514	Band Edge Dynamics in CdSe Nanocrystals Observed by Ultrafast Fluorescence Upconversion. *Journal of Physical Chemistry C*, **2008**, 112, 436-442	3.8	31
513	On the origin of transverse incoherence in Z-contrast STEM. *Microscopy (Oxford, England)*, **2001**, 50, 227-33	1.5	31
512	Synthesis and atomic-level characterization of Ni nanoparticles in Al2O3 matrix. *Applied Physics Letters*, **2002**, 81, 4204-4206	3.4	31
511	Zero loss peak deconvolution for bandgap EEL spectra. *Journal of Electron Microscopy*, **2000**, 49, 517-24		31
510	Microstructural Origins of High Piezoelectric Performance: A Pathway to Practical Lead-Free Materials. *Advanced Functional Materials*, **2019**, 29, 1902911	15.6	30
509	Phase-Controlled Synthesis of Monolayer Ternary Telluride with a Random Local Displacement of Tellurium Atoms. *Advanced Materials*, **2019**, 31, e1900862	24	30
508	Insight into spin transport in oxide heterostructures from interface-resolved magnetic mapping. *Nature Communications*, **2015**, 6, 6306	17.4	30
507	Simultaneous enhancement of electronic and Li+ ion conductivity in LiFePO4. *Applied Physics Letters*, **2012**, 101, 033901	3.4	30
506	TEM and EELS measurements of interface roughness in epitaxial Fe/MgO/Fe magnetic tunnel junctions. *Physical Review B*, **2009**, 79,	3.3	30
505	Electronic and crystal-field effects in the fine structure of electron energy-loss spectra of manganites. *Physical Review B*, **2009**, 79,	3.3	30
504	Study of supported ruthenium catalysts by STEM. *Journal of Microscopy*, **1981**, 124, 15-22	1.9	30
503	Ambipolar ferromagnetism by electrostatic doping of a manganite. *Nature Communications*, **2018**, 9, 1897	17.4	30
502	Quantitative comparison of bright field and annular bright field imaging modes for characterization of oxygen octahedral tilts. *Ultramicroscopy*, **2017**, 181, 1-7	3.1	29
501	Simultaneous Boost of Power Factor and Figure-of-Merit in In-Cu Codoped SnTe. *Small*, **2019**, 15, e1902493	11	29
500	Enhanced Thermoelectric and Mechanical Properties in Yb0.3Co4Sb12 with In Situ Formed CoSi Nanoprecipitates. *Advanced Energy Materials*, **2019**, 9, 1902435	21.8	29
499	Formation of stable dopant interstitials during ion implantation of silicon. *Journal of Materials Research*, **1986**, 1, 476-492	2.5	29

498	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. *Nature Communications*, **2020**, 11, 4647	17.4	29
497	Single atom visibility in STEM optical depth sectioning. *Applied Physics Letters*, **2016**, 109, 163102	3.4	29
496	Promoted Glycerol Oxidation Reaction in an Interface-Confined Hierarchically Structured Catalyst. *Advanced Materials*, **2019**, 31, e1804763	24	29
495	Open hollow CoPt clusters embedded in carbon nanoflake arrays for highly efficient alkaline water splitting. *Journal of Materials Chemistry A*, **2018**, 6, 20214-20223	13	29
494	Single-atom dynamics in scanning transmission electron microscopy. *MRS Bulletin*, **2017**, 42, 644-652	3.2	28
493	Transition metal atoms on different alumina phases: The role of subsurface sites on catalytic activity. *Physical Review B*, **2003**, 67,	3.3	28
492	The effect of As passivation on the molecular beam epitaxial growth of high-quality single-domain CdTe(111)B on Si(111) substrates. *Applied Physics Letters*, **1999**, 75, 349-351	3.4	28
491	Plume-induced stress in pulsed-laser deposited CeO2 films. *Applied Physics Letters*, **1999**, 74, 2134-2136	3.4	28
490	Nanoscale Topotactic Phase Transformation in SrFeO Epitaxial Thin Films for High-Density Resistive Switching Memory. *Advanced Materials*, **2019**, 31, e1903679	24	27
489	Two-Dimensional Metallic NiTe with Ultrahigh Environmental Stability, Conductivity, and Electrocatalytic Activity. *ACS Nano*, **2020**, 14, 9011-9020	16.7	27
488	Spin-Valley Locking Effect in Defect States of Monolayer MoS. *Nano Letters*, **2020**, 20, 2129-2136	11.5	27
487	Interface-based tuning of Rashba spin-orbit interaction in asymmetric oxide heterostructures with 3d electrons. *Nature Communications*, **2019**, 10, 3052	17.4	27
486	Domain epitaxy in TiO2/Al2O3 thin film heterostructures with Ti2O3 transient layer. *Applied Physics Letters*, **2012**, 100, 251606	3.4	27
485	Grain boundary complexion transitions in WO3- and CuO-doped TiO2 bicrystals. *Acta Materialia*, **2013**, 61, 1691-1704	8.4	27
484	Symmetrical interfacial reconstruction and magnetism in La0.7Ca0.3MnO3/YBa2Cu3O7/La0.7Ca0.3MnO3 heterostructures. *Physical Review B*, **2011**, 84,	3.3	27
483	Determination of the strain generated in InAs/InP quantum wires: prediction of nucleation sites. *Nanotechnology*, **2006**, 17, 5652-8	3.4	27
482	Incorporation of Sb in InAsGaAs quantum dots. *Applied Physics Letters*, **2007**, 91, 263105	3.4	27
481	Sublattice Resolution Structural and Chemical Analysis of Individual CdSe Nanocrystals Using Atomic Number Contrast Scanning Transmission Electron Microscopy and Electron Energy Loss Spectroscopy. *Journal of Physical Chemistry B*, **2001**, 105, 361-369	3.4	27

480	Epitaxial growth of Y2O3:Eu thin films on LaAlO3. *Applied Physics Letters*, **1999**, 75, 2223-2225	3.4	27
479	Applications of STEM-EELS to complex oxides. *Materials Science in Semiconductor Processing*, **2017**, 65, 49-63	4.3	26
478	Nanoscale doping profiles within CdTe grain boundaries and at the CdS/CdTe interface revealed by atom probe tomography and STEM EBIC. *Solar Energy Materials and Solar Cells*, **2016**, 150, 95-101	6.4	26
477	Competition between covalent bonding and charge transfer at complex-oxide interfaces. *Physical Review Letters*, **2014**, 112, 196802	7.4	26
476	Tuning structural and mechanical properties of two-dimensional molecular crystals: the roles of carbon side chains. *Nano Letters*, **2012**, 12, 1229-34	11.5	26
475	Few-layer graphene as a support film for transmission electron microscopy imaging of nanoparticles. *ACS Applied Materials & Interfaces*, **2009**, 1, 2886-92	9.5	26
474	Thickness dependence of the exchange bias in epitaxial manganite bilayers. *Physical Review B*, **2009**, 79,	3.3	26
473	Spatial resolution and information transfer in scanning transmission electron microscopy. *Microscopy and Microanalysis*, **2008**, 14, 36-47	0.5	26
472	Direct Observation of Inversion Domain Boundaries of GaN on c-Sapphire at Sub-Ångstrom Resolution. *Advanced Materials*, **2008**, 20, 2162-2165	24	26
471	Atomic ordering at an amorphous/crystal interface. *Applied Physics Letters*, **2006**, 89, 051908	3.4	26
470	Hollow structure engineering of FeCo alloy nanoparticles electrospun in nitrogen-doped carbon enables high performance flexible all-solid-state zinc–air batteries. *Sustainable Energy and Fuels*, **2020**, 4, 1747-1753	5.8	26
469	Atomically sharp interface enabled ultrahigh-speed non-volatile memory devices. *Nature Nanotechnology*, **2021**, 16, 882-887	28.7	26
468	The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. *Advanced Materials*, **2018**, 30, e1802402	24	26
467	Chip-Level Integration of Covalent Organic Frameworks for Trace Benzene Sensing. *ACS Sensors*, **2020**, 5, 1474-1481	9.2	25
466	Progress and prospects of aberration-corrected STEM for functional materials. *Ultramicroscopy*, **2018**, 194, 182-192	3.1	25
465	Direct imaging of dislocation core structures by Z-contrast STEM. *Philosophical Magazine*, **2006**, 86, 4699-4725	1.6	25
464	Atomic Structure of a 36.8 (210) Tilt Grain Boundary in TiO2. *Journal of the American Ceramic Society*, **2005**, 80, 499-502	3.8	25
463	Space-confined microwave synthesis of ternary-layered BiOCl crystals with high-performance ultraviolet photodetection. *Informa Materia*, **2020**, 2, 593-600	23.1	25

462	Defect-controlled electrocaloric effect in PbZrO3 thin films. *Journal of Materials Chemistry C*, **2018**, 6, 10332-10340	7.1	25
461	Selective Engineering of Chalcogen Defects in MoS by Low-Energy Helium Plasma. *ACS Applied Materials & Interfaces*, **2019**, 11, 24404-24411	9.5	24
460	High-Energy Gain Upconversion in Monolayer Tungsten Disulfide Photodetectors. *Nano Letters*, **2019**, 19, 5595-5603	11.5	24
459	Healing of Planar Defects in 2D Materials via Grain Boundary Sliding. *Advanced Materials*, **2019**, 31, e1900237	24	24
458	Low-loss electron energy loss spectroscopy: An atomic-resolution complement to optical spectroscopies and application to graphene. *Physical Review B*, **2015**, 92,	3.3	24
457	STEM imaging of single Pd atoms in activated carbon fibers considered for hydrogen storage. *Carbon*, **2011**, 49, 4059-4063	10.4	24
456	Investigating the optical properties of dislocations by scanning transmission electron microscopy. *Scanning*, **2008**, 30, 287-98	1.6	24
455	[11□00](□1102) twin boundaries in wurtzite ZnO and group-III-nitrides. *Physical Review B*, **2005**, 71,	3.3	24
454	Formation of low dislocation density silicon-on-insulator by a single implantation and annealing. *Applied Physics Letters*, **1990**, 57, 156-158	3.4	24
453	Ordered clustering of single atomic Te vacancies in atomically thin PtTe promotes hydrogen evolution catalysis. *Nature Communications*, **2021**, 12, 2351	17.4	24
452	Multiferroic tunnel junctions and ferroelectric control of magnetic state at interface (invited). *Journal of Applied Physics*, **2015**, 117, 172601	2.5	23
451	S□Te Interdiffusion within Grains and Grain Boundaries in CdTe Solar Cells. *IEEE Journal of Photovoltaics*, **2014**, 4, 1636-1643	3.7	23
450	Ab initio calculations of rigid-body displacements at the Σ5 (210) tilt grain boundary in TiO2. *Physical Review B*, **2000**, 61, 15645-15648	3.3	23
449	Cuspidal pit formation during the growth of SixGe1□x strained films. *Applied Physics Letters*, **1995**, 66, 34-36	3.4	23
448	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. *ACS Applied Materials & Interfaces*, **2019**, 11, 17359-17367	9.5	22
447	Extremely low thermal conductivity from bismuth selenohalides with 1D soft crystal structure. *Science China Materials*, **2020**, 63, 1759-1768	7.1	22
446	Anomalous Hall magnetoresistance in a ferromagnet. *Nature Communications*, **2018**, 9, 2255	17.4	22
445	Interlaced crystals having a perfect Bravais lattice and complex chemical order revealed by real-space crystallography. *Nature Communications*, **2014**, 5, 5431	17.4	22

444	Synthesis and characterization of p-n homojunction-containing zinc oxide nanowires. *Nanoscale*, **2013**, 5, 2259-63	7.7	22
443	Single-atom fabrication with electron and ion beams: From surfaces and two-dimensional materials toward three-dimensional atom-by-atom assembly. *MRS Bulletin*, **2017**, 42, 637-643	3.2	22
442	Understanding individual defects in CdTe thin-film solar cells via STEM: From atomic structure to electrical activity. *Materials Science in Semiconductor Processing*, **2017**, 65, 64-76	4.3	22
441	Atomic-scale studies of cobalt distribution in CoTiO2 anatase thin films: Processing, microstructure, and the origin of ferromagnetism. *Journal of Applied Physics*, **2006**, 99, 08M114	2.5	22
440	Interfacial structure in silicon nitride sintered with lanthanide oxide. *Journal of Materials Science*, **2006**, 41, 4405-4412	4.3	22
439	Synthesis of spherical luminescent particulate coatings. *Journal of Applied Physics*, **1999**, 86, 1759-1761	2.5	22
438	Direct observation of oxygen-vacancy-enhanced polarization in a SrTiO3-buffered ferroelectric BaTiO3 film on GaAs. *Applied Physics Letters*, **2015**, 107, 201604	3.4	21
437	One-dimensional electron transport in Cu-tetracyanoquinodimethane organic nanowires. *Applied Physics Letters*, **2007**, 90, 193115	3.4	21
436	Atomic-scale manipulation of potential barriers at SrTiO3 grain boundaries. *Applied Physics Letters*, **2005**, 87, 121917	3.4	21
435	Atomic-resolution electron energy-loss spectroscopy in the scanning transmission electron microscope. *Journal of Microscopy*, **1995**, 180, 230-237	1.9	21
434	Ferromagnet/Two-Dimensional Semiconducting Transition-Metal Dichalcogenide Interface with Perpendicular Magnetic Anisotropy. *ACS Nano*, **2019**, 13, 2253-2261	16.7	21
433	Orthorhombic Ti2O3: A Polymorph-Dependent Narrow-Bandgap Ferromagnetic Oxide. *Advanced Functional Materials*, **2018**, 28, 1705657	15.6	21
432	High-yield production of stable antimonene quantum sheets for highly efficient organic photovoltaics. *Journal of Materials Chemistry A*, **2018**, 6, 23773-23779	13	21
431	Comprehensive Investigation on the Thermoelectric Properties of p-Type PbTe-PbSe-PbS Alloys. *Advanced Electronic Materials*, **2019**, 5, 1900609	6.4	20
430	Tunability of exchange bias in Ni@NiO core-shell nanoparticles obtained by sequential layer deposition. *Nanotechnology*, **2015**, 26, 405704	3.4	20
429	Precipitation of binary quasicrystals along dislocations. *Nature Communications*, **2018**, 9, 809	17.4	20
428	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. *Nature Communications*, **2019**, 10, 3149	17.4	20
427	Flux pinning and critical currents at low-angle grain boundaries in high-temperature superconductors. *Applied Physics Letters*, **2002**, 81, 2803-2805	3.4	20

426	Heteroepitaxy of GaAs on Si and Ge using alternating, low-energy ion beams. *Applied Physics Letters* , **1989**, 54, 1439-1441	3.4	20
425	Spatially resolved measurement of substitutional dopant concentrations in semiconductors. *Applied Physics Letters*, **1984**, 44, 547-549	3.4	20
424	Ultra-high resolution electron microscopy. *Reports on Progress in Physics*, **2017**, 80, 026101	14.4	19
423	A Coherently Strained Monoclinic [111]PbTiO3 Film Exhibiting Zero Poisson's Ratio State. *Advanced Functional Materials*, **2019**, 29, 1901687	15.6	19
422	Controlling the Magnetic Properties of LaMnO /SrTiO Heterostructures by Stoichiometry and Electronic Reconstruction: Atomic-Scale Evidence. *Advanced Materials*, **2019**, 31, e1901386	24	19
421	A machine perspective of atomic defects in scanning transmission electron microscopy. *Informa Materly*, **2019**, 1, 359-375	23.1	19
420	The role of the nanoscale in surface reactions: CO2 on CdSe. *Physical Review Letters*, **2002**, 89, 075506	7.4	19
419	Growth mechanisms and superconductivity of ultrathin Y1Ba2Cu3O 7 epitaxial films on (001) MgO substrates. *Applied Physics Letters*, **1993**, 62, 3363-3365	3.4	19
418	New interface structure for A-type CoSi2/Si(111). *Applied Physics Letters*, **1994**, 64, 2409-2411	3.4	19
417	Oxygen Disorder, a Way to Accommodate Large Epitaxial Strains in Oxides. *Advanced Materials Interfaces*, **2015**, 2, 1500344	4.6	18
416	Oxygen Stoichiometry Effect on Polar Properties of LaAlO3/SrTiO3. *Advanced Functional Materials*, **2018**, 28, 1707159	15.6	18
415	Enhancing Thermoelectric Performance of p-Type PbSe through Suppressing Electronic Thermal Transports. *ACS Applied Energy Materials*, **2019**, 2, 8236-8243	6.1	18
414	Fe2O3/Cu2O heterostructured nanocrystals. *Journal of Materials Chemistry A*, **2014**, 2, 8525-8533	13	18
413	Z-Contrast Imaging of Grain-Boundary Core Structures in Semiconductors. *MRS Bulletin*, **1997**, 22, 53-57	3.2	18
412	Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity. *Advanced Materials*, **2020**, 32, e2004477	24	18
411	New Family of Plasmonic Photocatalysts without Noble Metals. *Chemistry of Materials*, **2019**, 31, 2320-2327	9.6	17
410	Room Temperature Commensurate Charge Density Wave on Epitaxially Grown Bilayer 2H-Tantalum Sulfide on Hexagonal Boron Nitride. *ACS Nano*, **2020**, 14, 3917-3926	16.7	17
409	Material structure, properties, and dynamics through scanning transmission electron microscopy. *Journal of Analytical Science and Technology*, **2018**, 9, 11	3.4	17

408	Layer Rotation-Angle-Dependent Excitonic Absorption in van der Waals Heterostructures Revealed by Electron Energy Loss Spectroscopy. *ACS Nano*, **2019**, 13, 9541-9550	16.7	17
407	Direct Observation of Atomic Dynamics and Silicon Doping at a Topological Defect in Graphene. *Angewandte Chemie*, **2014**, 126, 9054-9058	3.6	17
406	Microscopy: Hasten high resolution. *Nature*, **2014**, 515, 487-8	50.4	17
405	Simulation of spatially resolved electron energy loss near-edge structure for scanning transmission electron microscopy. *Physical Review Letters*, **2012**, 109, 246101	7.4	17
404	Calculation of integrated intensities in aberration-corrected Z-contrast images. *Journal of Electron Microscopy*, **2011**, 60, 29-33		17
403	Atomic layer graphoepitaxy for single crystal heterostructures. *Applied Physics Letters*, **1997**, 70, 3113-3115	3.4	17
402	Experimental probe of adsorbate binding energies at internal crystalline/amorphous interfaces in Gd-doped Si3N4. *Applied Physics Letters*, **2008**, 92, 163110	3.4	17
401	Structure determination of a planar defect in SrBi2Ta2O9. *Applied Physics Letters*, **1999**, 75, 1961-1963	3.4	17
400	Photon-controlled fabrication of amorphous superlattice structures using ArF (193 nm) excimer laser photolysis. *Applied Physics Letters*, **1988**, 52, 1868-1870	3.4	17
399	Trimetal atoms confined in openly accessible nitrogen-doped carbon constructs for an efficient ORR. *Journal of Materials Chemistry A*, **2020**, 8, 17266-17275	13	17
398	Expedient synthesis of -hydrazone esters and 1-indazole scaffolds through heterogeneous single-atom platinum catalysis. *Science Advances*, **2019**, 5, eaay1537	14.3	17
397	Coherent Sb/CuTe Core/Shell Nanostructure with Large Strain Contrast Boosting the Thermoelectric Performance of n-Type PbTe. *Advanced Functional Materials*, **2021**, 31, 2007340	15.6	17
396	Remarkably Enhanced Negative Electrocaloric Effect in PbZrO Thin Film by Interface Engineering. *ACS Applied Materials & Interfaces*, **2019**, 11, 36863-36870	9.5	16
395	Seeing atomic-scale structural origins and foreseeing new pathways to improved thermoelectric materials. *Materials Horizons*, **2019**, 6, 1548-1570	14.4	16
394	Engineering the photoresponse of liquid-exfoliated 2D materials by size selection and controlled mixing for an ultrasensitive and ultraresponsive photodetector. *Materials Horizons*, **2020**, 7, 3325-3338	14.4	16
393	Image simulation for electron energy loss spectroscopy. *Micron*, **2008**, 39, 676-84	2.3	16
392	Optical and analytical transmission-electron-microscopy studies of thermochemically reduced MgO crystals. *Physical Review B*, **1988**, 38, 4231-4238	3.3	16
391	Interface-Induced Enhancement of Ferromagnetism in Insulating LaMnO Ultrathin Films. *ACS Applied Materials & Interfaces*, **2017**, 9, 44931-44937	9.5	16

390	LDA+U/GGA+U calculations of structural and electronic properties of CdTe: Dependence on the effective U parameter. *Computational Materials Science*, **2015**, 98, 18-23	3.2	15
389	High yield electrochemical exfoliation synthesis of tin selenide quantum dots for high-performance lithium-ion batteries. *Journal of Materials Chemistry A*, **2019**, 7, 23958-23963	13	15
388	Synergistic boost of output power density and efficiency in In-Li-codoped SnTe. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 21998-22003	11.5	15
387	Characterization of surface metallic states in SrTiO3 by means of aberration corrected electron microscopy. *Ultramicroscopy*, **2013**, 127, 109-13	3.1	15
386	Nanostructured columnar heterostructures of TiO2 and Cu2O enabled by a thin-film self-assembly approach: Potential for photovoltaics. *Materials Research Bulletin*, **2013**, 48, 352-356	5.1	15
385	Compositional analysis with atomic column spatial resolution by 5th-order aberration-corrected scanning transmission electron microscopy. *Microscopy and Microanalysis*, **2011**, 17, 578-81	0.5	15
384	New insights into the kinetics of the stress-driven two-dimensional to three-dimensional transition. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **1996**, 14, 2199		15
383	Direct imaging of quantum wires nucleated at diatomic steps. *Applied Physics Letters*, **2007**, 91, 143112	3.4	15
382	Scanning Transmission Electron Microscopy for Nanostructure Characterization **2006**, 152-191		15
381	Atomic scale characterization of complex oxide interfaces. *Journal of Materials Science*, **2006**, 41, 4389-4393	4.5	15
380	Z-contrast investigation of the ordered atomic interface of CoSi2/Si(001) layers. *Applied Physics Letters*, **1994**, 64, 3608-3610	3.4	15
379	Self-Limiting Growth Kinetics of 3D Coherent Islands. *Materials Research Society Symposia Proceedings*, **1995**, 399, 271		15
378	Zero-Valent Palladium Single-Atoms Catalysts Confined in Black Phosphorus for Efficient Semi-Hydrogenation. *Advanced Materials*, **2021**, 33, e2008471	24	15
377	Anatase TiO-A Model System for Large Polaron Transport. *ACS Applied Materials & Interfaces*, **2018**, 10, 38201-38208	9.5	15
376	Unraveling High-Yield Phase-Transition Dynamics in Transition Metal Dichalcogenides on Metallic Substrates. *Advanced Science*, **2019**, 6, 1802093	13.6	14
375	Towards atomic scale engineering of rare-earth-doped SiAlON ceramics through aberration-corrected scanning transmission electron microscopy. *Scripta Materialia*, **2011**, 65, 656-659	5.6	14
374	Ordering of As impurities in a Si dislocation core. *Applied Physics Letters*, **1997**, 70, 336-338	3.4	14
373	Mechanisms of strain induced roughening and dislocation multiplication in SixGe1-xthin films. *Journal of Electronic Materials*, **1997**, 26, 1039-1047	1.9	14

372	Aberration-corrected STEM: current performance and future directions. *Journal of Physics: Conference Series*, **2006**, 26, 7-12	0.3	14
371	Aberration-Corrected Scanning Transmission Electron Microscopy: The Potential for Nano- and Interface Science. *International Journal of Materials Research*, **2003**, 94, 350-357		14
370	Medium Entropy-Enabled High Performance Cubic GeTe Thermoelectrics. *Advanced Science*, **2021**, 8, 2100220	13.6	14
369	From Self-Assembly Hierarchical h-BN Patterns to Centimeter-Scale Uniform Monolayer h-BN Film. *Advanced Materials Interfaces*, **2019**, 6, 1801493	4.6	14
368	Artificial two-dimensional polar metal by charge transfer to a ferroelectric insulator. *Communications Physics*, **2019**, 2,	5.4	13
367	Spectroscopic imaging in electron microscopy. *MRS Bulletin*, **2012**, 37, 13-18	3.2	13
366	Structural model for the Al72Ni20Co8 decagonal quasicrystals. *Physical Review B*, **2000**, 61, 14291-14294	3.3	13
365	Redistribution and activation of implanted S, Se, Te, Be, Mg, and C in GaN. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1999**, 17, 1226-1229	2.9	13
364	Damage nucleation and vacancy-induced structural transformation in Si grain boundaries. *Applied Physics Letters*, **1999**, 75, 2380-2382	3.4	13
363	Atomic-resolution imaging and spectroscopy of semiconductor interfaces. *Applied Physics A: Solids and Surfaces*, **1993**, 57, 385-391		13
362	Optical and analytical transmission electron microscopy characterization of thermochemically reduced MgAl2O4 spinel. *Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties*, **1989**, 59, 907-916		13
361	Enhanced mechanical and thermoelectric properties enabled by hierarchical structure in medium-temperature Sb2Te3 based alloys. *Nano Energy*, **2020**, 78, 105228	17.1	13
360	Reversible hydrogen control of antiferromagnetic anisotropy in □FeO. *Nature Communications*, **2021**, 12, 1668	17.4	13
359	Binary Controls on Interfacial Magnetism in Manganite Heterostructures. *Advanced Functional Materials*, **2018**, 28, 1801766	15.6	13
358	Fulfilling Feynman□s dream: □Make the electron microscope 100 times better□ Are we there yet?. *MRS Bulletin*, **2015**, 40, 71-78	3.2	12
357	Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM0.01Se. *Journal of Materials Chemistry A*, **2020**, 8, 5699-5708	13	12
356	Controlled Growth of 3R Phase Tantalum Diselenide and Its Enhanced Superconductivity. *Journal of the American Chemical Society*, **2020**, 142, 2948-2955	16.4	12
355	Orbital occupancy and charge doping in iron-based superconductors. *Advanced Materials*, **2014**, 26, 6193-6198	28	12

354	Oxygen octahedral distortions in LaMO3/SrTiO3 superlattices. *Microscopy and Microanalysis*, **2014**, 20, 825-31	0.5	12
353	Atomic structure of misfit dislocations in nonpolar ZnO/Al2O3 heterostructures. *Applied Physics Letters*, **2010**, 97, 121914	3.4	12
352	Vortex beams for atomic resolution dichroism. *Microscopy (Oxford, England)*, **2011**, 60, 295-300	1.3	12
351	Defect mediated photocatalytic decomposition of 4-chlorophenol on epitaxial rutile thin films under visible and UV illumination. *Journal of Physics Condensed Matter*, **2012**, 24, 395005	1.8	12
350	Impurity segregation and ordering in Si/SiO2/HfO2 structures. *Physical Review B*, **2008**, 77,	3.3	12
349	Tunnel magnetoresistance in La0.7Ca0.3MnO3PrBa2Cu3O7La0.7Ca0.3MnO3. *Applied Physics Letters*, **2006**, 88, 022512	3.4	12
348	Quantitative Interpretation and Information Limits in Annular Dark-Field STEM Images. *Microscopy and Microanalysis*, **2000**, 6, 104-105	0.5	12
347	Cavity Formation in Simox Structures. *Materials Research Society Symposia Proceedings*, **1987**, 107, 79		12
346	High-Concentration Niobium-Substituted WS Basal Domains with Reconfigured Electronic Band Structure for Hydrogen Evolution Reaction. *ACS Applied Materials & Interfaces*, **2019**, 11, 34862-34868	9.5	11
345	Outstanding Piezoelectric Performance in Lead-Free 0.95(K,Na)(Sb,Nb)O3-0.05(Bi,Na,K)ZrO3 Thick Films with Oriented Nanophase Coexistence. *Advanced Electronic Materials*, **2019**, 5, 1800691	6.4	11
344	Electrochemically Induced Amorphization and Unique Lithium and Sodium Storage Pathways in FeSbO Nanocrystals. *ACS Applied Materials & Interfaces*, **2019**, 11, 20082-20090	9.5	11
343	Study of unique and highly crystalline MoS2/MoO2 nanostructures for electro chemical applications. *Materials Research Letters*, **2019**, 7, 275-281	7.4	11
342	Imprinting Ferromagnetism and Superconductivity in Single Atomic Layers of Molecular Superlattices. *Advanced Materials*, **2020**, 32, e1907645	24	11
341	A Novel Sb2Te3 Polymorph Stable at the Nanoscale. *Chemistry of Materials*, **2015**, 27, 4368-4373	9.6	11
340	Crystal-induced effects at crystal/amorphous interfaces: The case of Si3N4/SiO2. *Physical Review B*, **2010**, 82,	3.3	11
339	Universal optical response of Si-Si bonds and its evolution from nanoparticles to bulk crystals. *Physical Review B*, **2009**, 79,	3.3	11
338	Evolution of the nuclear and magnetic structures of TlFe1.6Se2 with temperature. *Physical Review B*, **2012**, 85,	3.3	11
337	Direct correlation between Tc and CuO2 bilayer spacing in YBa2Cu3O7. *Physical Review B*, **2002**, 66,	3.3	11

336	Atomic structure of a Ca-doped [001] tilt grain boundary in MgO. *Journal of Electron Microscopy*, **1998**, 47, 115-120		11
335	Formation of partially coherent antimony precipitates in ion implanted thermally annealed silicon. *Journal of Applied Physics*, **1983**, 54, 6875-6878	2.5	11
334	The Role of Trapped Interstitials During Rapid Thermal Annealing. *Materials Research Society Symposia Proceedings*, **1985**, 52, 37		11
333	Formation of silicides by rapid thermal annealing over polycrystalline silicon. *Journal of Applied Physics*, **1986**, 60, 631-634	2.5	11
332	MoS /Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness. *Advanced Materials*, **2020**, 32, e2002704	24	11
331	NiFe Layered Double-Hydroxide Nanosheets on a Cactuslike (Ni,Co)Se2 Support for Water Oxidation. *ACS Applied Nano Materials*, **2019**, 2, 325-333	5.6	11
330	Two-Dimensional Metallic Vanadium Ditelluride as a High-Performance Electrode Material. *ACS Nano*, **2021**, 15, 1858-1868	16.7	11
329	Ferromagnetism and matrix-dependent charge transfer in strained LaMnO3□LaCoO3 superlattices. *Materials Research Letters*, **2018**, 6, 501-507	7.4	11
328	Location-selective growth of two-dimensional metallic/semiconducting transition metal dichalcogenide heterostructures. *Nanoscale*, **2019**, 11, 4183-4189	7.7	10
327	Enhanced magnetism in lightly doped manganite heterostructures: strain or stoichiometry?. *Nanoscale*, **2019**, 11, 7364-7370	7.7	10
326	On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal□Organic Framework Films. *Angewandte Chemie*, **2019**, 131, 14227-14232	3.6	10
325	Simulation of probe position-dependent electron energy-loss fine structure. *Microscopy and Microanalysis*, **2014**, 20, 784-97	0.5	10
324	3D polarization texture of a symmetric 4-fold flux closure domain in strained ferroelectric PbTiO3 films. *Journal of Materials Research*, **2017**, 32, 957-967	2.5	10
323	A Scan Through the History of STEM **2011**, 1-90		10
322	Imaging and spectroscopy of defects in semiconductors using aberration-corrected STEM. *Applied Physics A: Materials Science and Processing*, **2009**, 96, 161-169	2.6	10
321	Scanning transmission electron microscopy: Seeing the atoms more clearly. *MRS Bulletin*, **2012**, 37, 943-951	3.1	10
320	A method to determine the strain and nucleation sites of stacked nano-objects. *Journal of Nanoscience and Nanotechnology*, **2008**, 8, 3422-6	1.3	10
319	Heteroepitaxy of 76Ge films on GaAs by direct deposition from a low-energy ion beam. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **1989**, 7, 1372-1377	2.9	10

318	Precipitation, Phase Transformation, and Enhanced Diffusion in Ion-Implanted Silicon. *Materials Research Society Symposia Proceedings*, **1988**, 100, 411		10
317	Enhanced Magnetic Anisotropy and Orbital Symmetry Breaking in Manganite Heterostructures. *Advanced Functional Materials*, **2020**, 30, 1909536	15.6	10
316	Nanoscale bubble domains with polar topologies in bulk ferroelectrics. *Nature Communications*, **2021**, 12, 3632	17.4	10
315	Phospho-oxynitride Layer Protected Cobalt Phosphonitride Nanowire Arrays for High-Rate and Stable Supercapacitors. *ACS Applied Energy Materials*, **2019**, 2, 616-626	6.1	10
314	Quasi-Paired Pt Atomic Sites on Mo C Promoting Selective Four-Electron Oxygen Reduction. *Advanced Science*, **2021**, 8, e2101344	13.6	10
313	Electrocaloric effect in ferroelectric ceramics with point defects. *Applied Physics Letters*, **2019**, 114, 142901	3.4	9
312	Watching Atoms Work: Nanocluster Structure and Dynamics. *ACS Nano*, **2015**, 9, 9437-40	16.7	9
311	A Pathway for the Growth of Core□Shell Pt□Pd Nanoparticles. *Journal of Physical Chemistry C*, **2015**, 119, 25114-25121	3.8	9
310	The Role of Ferroelectric Polarization in Resistive Memory Properties of Metal/Insulator/Semiconductor Tunnel Junctions: A Comparative Study. *ACS Applied Materials & Interfaces*, **2020**, 12, 32935-32942	9.5	9
309	Percolated Strain Networks and Universal Scaling Properties of Strain Glasses. *Physical Review Letters*, **2019**, 123, 015701	7.4	9
308	Direct Electronic Property Imaging of a Nanocrystal-Based Photovoltaic Device by Electron Beam-Induced Current via Scanning Electron Microscopy. *Journal of Physical Chemistry Letters*, **2014** , 5, 856-60	6.4	9
307	Probing the electronic structure and optical response of a graphene quantum disk supported on monolayer graphene. *Journal of Physics Condensed Matter*, **2012**, 24, 314213	1.8	9
306	Disorder-controlled superconductivity at YBa2Cu3O7/SrTiO3 interfaces. *Physical Review B*, **2013**, 87,	3.3	9
305	Transmission Electron Microscopy: A Textbook for Materials Science, Second Edition. David B. Williams and C. Barry Carter. Springer, New York, 2009, 932 pages. ISBN 978-0-387-76500-6 (Hardcover), ISBN 978-0-387-76502-0 (Softcover). *Microscopy and Microanalysis*, **2010**, 16, 111-111	0.5	9
304	Identification and lattice location of oxygen impurities in □Si3N4. *Applied Physics Letters*, **2009**, 95, 164101	3.4	9
303	New views of materials through aberration-corrected scanning transmission electron microscopy. *Microscopy (Oxford, England)*, **2011**, 60 Suppl 1, S213-23	1.3	9
302	Nanoscale Characterization of Materials. *MRS Bulletin*, **1997**, 22, 17-21	3.2	9
301	Rapid autotuning for crystalline specimens from an inline hologram. *Microscopy (Oxford, England)*, **2008**, 57, 195-201	1.3	9

300	3D Atomic Resolution Imaging through Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2004**, 10, 1172-1173	0.5	9
299	Heteroepitaxial growth of Ge films on (100) GaAs by pyrolysis of digermane. *Applied Physics Letters*, **1989**, 55, 858-860	3.4	9
298	Controlled Sign Reversal of Electroresistance in Oxide Tunnel Junctions by Electrochemical-Ferroelectric Coupling. *Physical Review Letters*, **2020**, 125, 266802	7.4	9
297	Introducing Normalized Centrifugation for a More Accurate Thermodynamic Analysis of Molybdenum Disulfide Dispersions: A Study on Mixed Solvents of Alcohols and Amines with Water. *ACS Applied Materials & Interfaces*, **2020**, 12, 3096-3103	9.5	9
296	Flexoelectric Thin-Film Photodetectors. *Nano Letters*, **2021**, 21, 2946-2952	11.5	9
295	New insights into the role of dislocation engineering in N-type filled skutterudite CoSb3. *Journal of Materials Chemistry C*, **2019**, 7, 13622-13631	7.1	9
294	Electrochemically Exfoliated Platinum Dichalcogenide Atomic Layers for High-Performance Air-Stable Infrared Photodetectors. *ACS Applied Materials & Interfaces*, **2021**, 13, 8518-8527	9.5	9
293	Temperature-Controlled Vapor Deposition of Highly Conductive p-Type Reduced Molybdenum Oxides by Hydrogen Reduction. *Journal of Physical Chemistry Letters*, **2018**, 9, 7185-7191	6.4	9
292	Atomic-Resolution Environmental Transmission Electron Microscopy375-403		9
291	Imaging Secondary Ion Mass Spectroscopy709-744		9
290	Domain Engineering in ReS2 by Coupling Strain during Electrochemical Exfoliation. *Advanced Functional Materials*, **2020**, 30, 2003057	15.6	8
289	Direct observation of electronic-liquid-crystal phase transitions and their microscopic origin in LaCaMnO. *Scientific Reports*, **2016**, 6, 37624	4.9	8
288	Signatures of distinct impurity configurations in atomic-resolution valence electron-energy-loss spectroscopy: Application to graphene. *Physical Review B*, **2016**, 94,	3.3	8
287	Atomic scale studies of La/Sr ordering in colossal magnetoresistant La(2-2x)Sr(1+2x)Mn2O7 single crystals. *Microscopy and Microanalysis*, **2014**, 20, 1791-7	0.5	8
286	Dipolar interactions and their influence on the critical single domain grain size of Ni in layered Ni/Al(2)O(3) composites. *Journal of Physics Condensed Matter*, **2008**, 20, 385213	1.8	8
285	Effect of spacer layer thickness on magnetic interactions in self-assembled single domain iron nanoparticles. *Journal of Applied Physics*, **2008**, 103, 07D515	2.5	8
284	Atomic resolution study of the interfacial bonding at Si3N4/CeO2 grain boundaries. *Applied Physics Letters*, **2008**, 93, 053104	3.4	8
283	The effect of matrix and substrate on the coercivity and blocking temperature of self-assembled Ni nanoparticles. *Journal of Applied Physics*, **2008**, 104, 073910	2.5	8

282	Comment on "Single Crystals of Single-Walled Carbon Nanotubes Formed by Self-Assembly". *Science*, **2003**, 300, 1236; author reply 1236	33.3	8
281	Simultaneous Z-Contrast and Phase Contrast Imaging of Oxygen in Ceramic Interfaces. *Microscopy and Microanalysis*, **2004**, 10, 256-257	0.5	8
280	Atomic resolution Z-contrast imaging of semiconductors. *Journal of Electron Microscopy*, **2000**, 49, 231-44		8
279	Novel method for the synthesis of thin film coatings on particulate materials. *Journal of Materials Research*, **1999**, 14, 3281-3291	2.5	8
278	Column-by-Column Compositional Mapping at Semiconductor Interfaces Using Z-Contrast Stem. *Materials Research Society Symposia Proceedings*, **1990**, 183, 223		8
277	Solution-Processable Metal-Organic Framework Nanosheets with Variable Functionalities. *Advanced Materials*, **2021**, 33, e2101257	24	8
276	Magnetic Ordering in Sr3YCo4O10+x. *Scientific Reports*, **2016**, 6, 19762	4.9	8
275	Effects of precursor pre-treatment on the vapor deposition of WS2 monolayers. *Nanoscale Advances*, **2019**, 1, 953-960	5.1	7
274	Nano-Ferroelectric for High Efficiency Overall Water Splitting under Ultrasonic Vibration. *Angewandte Chemie*, **2019**, 131, 15220-15225	3.6	7
273	Electron doping by charge transfer at LaFeO3/Sm2CuO4 epitaxial interfaces. *Advanced Materials*, **2013**, 25, 1468-73	24	7
272	Pulsed infrared laser annealing of gold nanoparticles embedded in a silica matrix. *Journal of Applied Physics*, **2008**, 103, 083545	2.5	7
271	The use of Magnetron Sputtering for the Production of Heterogeneous Catalysts. *Studies in Surface Science and Catalysis*, **2006**, 71-78	1.8	7
270	Cathodoluminescent properties at nanometer resolution through Z-contrast scanning transmission electron microscopy. *Applied Physics Letters*, **2000**, 77, 594-596	3.4	7
269	Ordered structures at Si on Ge(001) interfaces. *Physical Review Letters*, **1995**, 75, 184	7.4	7
268	Z-contrast imaging of supported Pt and Pd clusters. *Microscopy Research and Technique*, **1994**, 28, 427-9	2.8	7
267	Characterization and Evolution of Microstructures Formed by High Dose Oxygen Implantation of silicont. *Materials Research Society Symposia Proceedings*, **1986**, 74, 591		7
266	High-resolution imaging and electron energy-loss studies of platelet defects in diamond. *Journal of the Chemical Society, Faraday Transactions 2*, **1981**, 77, 1367		7
265	Atomic-scale fatigue mechanism of ferroelectric tunnel junctions. *Science Advances*, **2021**, 7, eabh2716	14.3	7

264	Cavity Plasmonics in Tunnel Junctions: Outcoupling and the Role of Surface Roughness. *Physical Review Applied*, **2020**, 14,	4.3	7
263	Phase-Controlled Synthesis of Monolayer W Re S Alloy with Improved Photoresponse Performance. *Small*, **2020**, 16, e2000852	11	7
262	Biosensors: ZnO Nanosheets Abundant in Oxygen Vacancies Derived from Metal-Organic Frameworks for ppb-Level Gas Sensing (Adv. Mater. 11/2019). *Advanced Materials*, **2019**, 31, 1970076	24	6
261	Electronic and plasmonic phenomena at nonstoichiometric grain boundaries in metallic SrNbO. *Nanoscale*, **2020**, 12, 6844-6851	7.7	6
260	Direct Growth of Wafer-Scale, Transparent, p-Type Reduced-Graphene-Oxide-like Thin Films by Pulsed Laser Deposition. *ACS Nano*, **2020**, 14, 3290-3298	16.7	6
259	Nanoscale Phase Mixture and Multifield-Induced Topotactic Phase Transformation in SrFeO. *ACS Applied Materials & Interfaces*, **2020**, 12, 21883-21893	9.5	6
258	Multiscale Defects as Strong Phonon Scatters to Enhance Thermoelectric Performance in Mg2Sn1Sbx Solid Solutions. *Small Methods*, **2019**, 3, 1900412	12.8	6
257	Enhanced absorption in ultrathin Si by NiSi2nanoparticles. *Nanomaterials and Energy*, **2013**, 2, 11-19	1.1	6
256	Theoretical proposal: a tunable heterogeneous catalyst. *Surface Science*, **2000**, 470, L88-L92	1.8	6
255	High Resolution Z-Contrast Imaging of Semiconductor Interfaces. *MRS Bulletin*, **1991**, 16, 34-40	3.2	6
254	Transient Enhanced Diffusion in B+ and P+ Implanted Silicon. *Materials Research Society Symposia Proceedings*, **1986**, 74, 379		6
253	Excimer laser induced oxidation of ion-implanted silicon. *Applied Physics Letters*, **1988**, 53, 1720-1722	3.4	6
252	Time-Resolved Studies of Rapid Solidification in Highly Undercooled Molten Silicon. *Materials Research Society Symposia Proceedings*, **1984**, 35, 101		6
251	Electronegativity Induced Charge Balancing to Boost Stability and Activity of Amorphous Electrocatalyst.. *Advanced Materials*, **2021**, e2100537	24	6
250	Local and Global Bonding at the Si-SiO2 Interface. *Springer Series in Materials Science*, **2001**, 193-218	0.9	6
249	Magnetic Anisotropy of a Quasi Two-Dimensional Canted Antiferromagnet. *Nano Letters*, **2020**, 20, 1890-1895	11.5	6
248	Direct Laser Patterning of a 2D WSe2 Logic Circuit. *Advanced Functional Materials*, **2021**, 31, 2009549	15.6	6
247	Column-by-column observation of dislocation motion in CdTe: Dynamic scanning transmission electron microscopy. *Applied Physics Letters*, **2016**, 109, 143107	3.4	6

246	Symmetry of the Underlying Lattice in (K,Na)NbO-Based Relaxor Ferroelectrics with Large Electromechanical Response. *ACS Applied Materials & Interfaces*, **2021**, 13, 7461-7469	9.5	6
245	Single Atom Electrocatalysis: Heterogeneous Single Atom Electrocatalysis, Where Singles Are Married (Adv. Energy Mater. 9/2020). *Advanced Energy Materials*, **2020**, 10, 2070037	21.8	5
244	Energy-Efficient Stacks Covellite (CuS) on Polyethylene Terephthalate Film: A Sustainable Solution to Heat Management. *Journal of Physical Chemistry C*, **2020**, 124, 3314-3321	3.8	5
243	Probing plasmons in three dimensions by combining complementary spectroscopies in a scanning transmission electron microscope. *Nanotechnology*, **2016**, 27, 155202	3.4	5
242	Three-Dimensional Resonant Exciton in Monolayer Tungsten Diselenide Actuated by Spin-Orbit Coupling. *ACS Nano*, **2019**, 13, 14529-14539	16.7	5
241	Applications of Aberration-Corrected Scanning Transmission Electron Microscopy and Electron Energy Loss Spectroscopy to Complex Oxide Materials **2011**, 429-466		5
240	Morphological evolution of InAs/InP quantum wires through aberration-corrected scanning transmission electron microscopy. *Nanotechnology*, **2010**, 21, 325706	3.4	5
239	Spectroscopic imaging of electron energy loss spectra using ab initio data and function field visualization. *Ultramicroscopy*, **2009**, 109, 1472-8	3.1	5
238	Lorentz Microscopy and Electron Holography of Magnetic Materials **2012**, 221-251		5
237	Applications of aberration corrected scanning transmission electron microscopy and electron energy loss spectroscopy to thin oxide films and interfaces. *International Journal of Materials Research*, **2010**, 101, 21-26	0.5	5
236	Structural and flux-pinning properties of laser ablated YBa2Cu3O7 thin films: Effects of self-assembled CeO2 nanodots on LaAlO3 substrates. *Physica C: Superconductivity and Its Applications*, **2008**, 468, 2313-2316	1.3	5
235	Thickness-dependent pinning in a superconductor thin film. *Journal of Applied Physics*, **2007**, 101, 023916	2.5	5
234	Atomic Structures of Oxygen-associated Defects in Sintered Aluminum Nitride Ceramics. *Microscopy and Microanalysis*, **1999**, 5, 352-357	0.5	5
233	Evolving Surface Cusps During Strained Layer Epitaxy. *Materials Research Society Symposia Proceedings*, **1993**, 312, 47		5
232	Surface Stress, Morphological Development, and Dislocation Nucleation During Strained-Layer Epitaxy. *Materials Research Society Symposia Proceedings*, **1993**, 317, 297		5
231	Direct Imaging of Explosively Propagating Buried Molten Layers In Amorphous Silicon Using Optical, Tem and Ion Backscattering Measurements. *Materials Research Society Symposia Proceedings*, **1985**, 51, 131		5
230	On-Chip Template-Directed Conversion of Metal Hydroxides to Metal-Organic Framework Films with Enhanced Adhesion. *ACS Applied Materials & Interfaces*, **2020**, 12, 36715-36722	9.5	5
229	Unveiling Atomic-Scale Moir Features and Atomic Reconstructions in High-Angle Commensurately Twisted Transition Metal Dichalcogenide Homobilayers. *Nano Letters*, **2021**, 21, 3262-3270	11.5	5

228	Thermal-Assisted Vertical Electron Injections in Few-Layer Pyramidal-Structured MoS Crystals. *Journal of Physical Chemistry Letters*, **2019**, 10, 1292-1299	6.4	5
227	Electroresistance of Pt/BaTiO3/LaNiO3 ferroelectric tunnel junctions and its dependence on BaTiO3 thickness. *Materials Research Express*, **2019**, 6, 046307	1.7	5
226	Machine learning in scanning transmission electron microscopy. *Nature Reviews Methods Primers*, **2022**, 2,		5
225	Highly Polarized Fluorescent Film Based on Aligned Quantum Rods by Contact Ink-Jet Printing Method. *IEEE Photonics Journal*, **2019**, 11, 1-11	1.8	4
224	An Anomalous Magneto-Optic Effect in Epitaxial Indium Selenide Layers. *Nano Letters*, **2020**, 20, 5330-5338	11.5	4
223	Characteristic Lengths of Interlayer Charge Transfer in Correlated Oxide Heterostructures. *Nano Letters*, **2020**, 20, 2493-2499	11.5	4
222	Localization of Yttrium Segregation within YSZ Grain Boundary Dislocation Cores. *Physica Status Solidi (A) Applications and Materials Science*, **2018**, 215, 1800349	1.6	4
221	Correlated Lattice Instability and Emergent Charged Domain Walls at Oxide Heterointerfaces. *Advanced Functional Materials*, **2019**, 29, 1906655	15.6	4
220	Sample Preparation Techniques for Transmission Electron Microscopy **2012**, 473-498		4
219	Tuning fifth-order aberrations in a quadrupole-octupole corrector. *Microscopy and Microanalysis*, **2012**, 18, 699-704	0.5	4
218	Evidence of High-Pressure Rhodium Sesquioxide in the Rhodium/Alumina Catalytic System. *Journal of Physical Chemistry C*, **2008**, 112, 11831-11834	3.8	4
217	Scaling exponent within the side-jump mechanism of Hall effect size-dependence in Ni nanocrystals. *Applied Physics Letters*, **2008**, 93, 133105	3.4	4
216	The Ultimate Resolution in Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2002**, 8, 16-17	0.5	4
215	Formation of MnSb during the growth of MnSi layers in the presence of an Sb flux. *Journal of Applied Physics*, **2002**, 91, 4932-4935	2.5	4
214	The Effects of Microstructure on the Brightness of Pulsed Laser Deposited Y2O3:Eu Thin Film Phosphors for Field Emission Displays. *Materials Research Society Symposia Proceedings*, **2000**, 621, 2101		4
213	The mechanism for the high-quality single-phase growth of MnSi films on Si (111) in the presence of Sb flux. *Applied Physics Letters*, **1999**, 75, 2894-2896	3.4	4
212	Jesson et al. reply. *Physical Review Letters*, **1993**, 71, 3737	7.4	4
211	Grain Boundary Structure as a Function of Aluminum Level in Ni3Al. *Materials Research Society Symposia Proceedings*, **1990**, 213, 417		4

210	Time-Resolved and Nicrostructural Studies of Solidification in Undercooled Liquid Silicon. *Materials Research Society Symposia Proceedings*, **1988**, 100, 489		4
209	Metal Silicides Formed by Direct Ion Beam Deposition. *Materials Research Society Symposia Proceedings*, **1988**, 128, 47		4
208	Observation of perfect diamagnetism and interfacial effect on the electronic structures in infinite layer NdSrNiO superconductors.. *Nature Communications*, **2022**, 13, 743	17.4	4
207	Alkali-deficiency driven charged out-of-phase boundaries for giant electromechanical response. *Nature Communications*, **2021**, 12, 2841	17.4	4
206	Observation of perfect diamagnetism and interfacial effect on the electronic structures in infinite layer Nd0.8Sr0.2NiO2 superconductors		4
205	Probing the meta-stability of oxide core/shell nanoparticle systems at atomic resolution. *Chemical Engineering Journal*, **2021**, 405, 126820	14.7	4
204	Defect-nucleated phase transition in atomically-thin WS2. *2D Materials*, **2021**, 8, 025017	5.9	4
203	Facile MoS2 Growth on Reduced Graphene-Oxide via Liquid Phase Method. *Frontiers in Materials*, **2018**, 5,	4	4
202	Electric Field Control of the Magnetic Weyl Fermion in an Epitaxial SrRuO (111) Thin Film. *Advanced Materials*, **2021**, 33, e2101316	24	4
201	Self-assembled atomically thin hybrid conjugated polymer perovskites with two-dimensional structure. *Journal of Materials Chemistry C*, **2018**, 6, 8405-8410	7.1	3
200	From Thin Films to Nanopillars: Tunable Morphology of Covellite via Radio Frequency Magnetron Sputtering for Cost-Effective Photothermal Vaporization. *ACS Applied Nano Materials*, **2019**, 2, 7441-7448	5.6	3
199	Monochromatic STEM-EELS for Correlating the Atomic Structure and Optical Properties of Two-Dimensional Materials. *Microscopy and Microanalysis*, **2014**, 20, 96-97	0.5	3
198	The quest for inorganic fullerenes. *Journal of Applied Physics*, **2015**, 118, 134302	2.5	3
197	Nanoporous Carbon: Topological Defects: Origin of Nanopores and Enhanced Adsorption Performance in Nanoporous Carbon (Small 21/2012). *Small*, **2012**, 8, 3282-3282	11	3
196	Core Structures of Dislocations within CdTe Grains. *Materials Research Society Symposia Proceedings* , **2013**, 1526, 1		3
195	Electron Tomography **2012**, 253-279		3
194	Single-Atom Sensitivity for Solving Catalysis Problems. *Microscopy and Microanalysis*, **2004**, 10, 460-461	0.5	3
193	Limitations to the measurement of oxygen concentrations by HRTEM imposed by surface roughness. *Microscopy and Microanalysis*, **2005**, 11, 111-3; author reply 113-5	0.5	3

192	Atomic and Electronic Structure Investigations of HfO2/SiO2/Si Gate Stacks Using Aberration-Corrected STEM. *AIP Conference Proceedings*, **2005**,	0	3
191	The Role of Hydrogen in the Structure of Alumina. *Materials Research Society Symposia Proceedings*, **1998**, 549, 165		3
190	The Si/SiO2 Interface: Atomic Structures, Composition, Strain And Energetics. *Microscopy and Microanalysis*, **1999**, 5, 122-123	0.5	3
189	Diffusion, Segregation, and Recrystallization in High-Dose Ion-Implanted Si. *Materials Research Society Symposia Proceedings*, **1989**, 147, 45		3
188	Atomic Structure and Chemistry of Si/Ge Interfaces Determined by Z-Contrast Stem. *Materials Research Society Symposia Proceedings*, **1989**, 159, 447		3
187	Interfacial antiferromagnetic coupling between SrRuO3 and La0.7Sr0.3MnO3 with orthogonal easy axis. *Physical Review Materials*, **2018**, 2,	3.2	3
186	Z-Contrast Imaging in the Scanning Transmission Electron Microscope. *Springer Series in Surface Sciences*, **2001**, 81-111	0.4	3
185	Unlocking the origin of compositional fluctuations in InGaN light emitting diodes. *Physical Review Materials*, **2021**, 5,	3.2	3
184	Dynamic Transmission Electron Microscopy309-343		3
183	Atomic scale characterization of point and extended defects in niobate thin films. *Ultramicroscopy*, **2019**, 203, 82-87	3.1	2
182	Imaging in the STEM **2016**, 283-342		2
181	Oxygen Vacancy Ordering: a Degree of Freedom that can Control the Structural, Electronic and Magnetic Properties of Transition-Metal Oxide Films. *Microscopy and Microanalysis*, **2014**, 20, 556-557	0.5	2
180	Patterning: Atomic-Level Sculpting of Crystalline Oxides: Toward Bulk Nanofabrication with Single Atomic Plane Precision (Small 44/2015). *Small*, **2015**, 11, 5854-5854	11	2
179	Mapping chemical disorder and ferroelectric distortions in the double perovskite compound Sr 2-x Gd x MnTiO6 by atomic resolution electron microscopy and spectroscopy. *Microscopy and Microanalysis*, **2014**, 20, 731-9	0.5	2
178	Scanning Probe Microscopy Forces and Currents in the Nanoscale World **2012**, 539-614		2
177	Scanning Transmission Electron Microscopy: Z-Contrast Imaging **2012**, 1		2
176	Transmission Electron Microscopy: Overview and Challenges. *AIP Conference Proceedings*, **2003**,	0	2
175	Bonding, Defects, And Defect Dynamics In The Sic-SiO2 System. *Materials Research Society Symposia Proceedings*, **2000**, 640, 1		2

174	Towards Z-Contrast Imaging in an Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2000**, 6, 106-107	0.5	2
173	Yan, Pennycook, and Pang Reply:. *Physical Review Letters*, **1999**, 82, 4367-4367	7.4	2
172	Direct Observation of Intercalant and Catalyst Particle in Single Wall Carbon Nanotubes. *Materials Research Society Symposia Proceedings*, **1999**, 593, 129		2
171	Atomic Scale Structure and Chemistry of Interfaces by Z-Contrast Imaging and Electron Energy Loss Spectroscopy in the Stem. *Materials Research Society Symposia Proceedings*, **1994**, 341, 139		2
170	Direct Imaging of Ordering in Si-Ge Alloys, Ultrathin Superlattices, and Buried Ge Layers. *Materials Research Society Symposia Proceedings*, **1991**, 220, 141		2
169	High Resolution Z-Contrast Observation of GaAs/Si Hetero-Interfaces through Scanning Transmission Electron Microscope. *Japanese Journal of Applied Physics*, **1992**, 31, L1788-L1790	1.4	2
168	Electron Channeling Analysis and Z-C0ntrast Imaging of Dopants in Semiconductors. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1985**, 43, 296-299		2
167	High-resolution z-contrast imaging of semiconductor interfaces. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1989**, 47, 468-469		2
166	Electron beam triggered single-atom dynamics in two-dimensional materials. *Journal of Physics Condensed Matter*, **2021**, 33, 063001	1.8	2
165	Incoherence in atomic-resolution Z-contrast imaging. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1993**, 51, 978-979		2
164	Emergent Topological Hall Effect at a Charge-Transfer Interface. *Small*, **2020**, 16, e2004683	11	2
163	Tungsten Suboxide Nanoneedles as an Effective Thermal Shield through Near-Infrared Reflection and Absorption. *Journal of Physical Chemistry C*, **2021**, 125, 11115-11123	3.8	2
162	Fabrication and growth mechanism of ultra-crystalline C60 on silicon substrate in vacuum. *Carbon Letters*, **2021**, 31, 315-322	2.3	2
161	Bipolar Conduction and Giant Positive Magnetoresistance in Doped Metallic Titanium Oxide Heterostructures. *Advanced Materials Interfaces*, **2021**, 8, 2002147	4.6	2
160	Molybdenum Disulfid: Differentiating Polymorphs in Molybdenum Disulfide via Electron Microscopy (Adv. Mater. 47/2018). *Advanced Materials*, **2018**, 30, 1870360	24	2
159	Light-Emitting V-Pits: An Alternative Approach toward Luminescent Indium-Rich InGaN Quantum Dots. *ACS Photonics*,	6.3	2
158	Atomic Resolution Electron Microscopy45-79		2
157	Single-Atom Catalysts: Atomically Dispersed Cobalt Trifunctional Electrocatalysts with Tailored Coordination Environment for Flexible Rechargeable Zn–Air Battery and Self-Driven Water Splitting (Adv. Energy Mater. 48/2020). *Advanced Energy Materials*, **2020**, 10, 2070195	21.8	2

156	Piezoelectric Films: Outstanding Piezoelectric Performance in Lead-Free 0.95(K,Na)(Sb,Nb)O3-0.05(Bi,Na,K)ZrO3 Thick Films with Oriented Nanophase Coexistence (Adv. Electron. Mater. 4/2019). *Advanced Electronic Materials*, **2019**, 5, 1970020	6.4	1
155	Atomic Origin of Interface-Dependent Oxygen Migration by Electrochemical Gating at the LaAlO-SrTiO Heterointerface. *Advanced Science*, **2020**, 7, 2000729	13.6	1
154	Carbon Dioxide Reduction: Visible and Near-Infrared Photothermal Catalyzed Hydrogenation of Gaseous CO2 over Nanostructured Pd@Nb2O5 (Adv. Sci. 10/2016). *Advanced Science*, **2016**, 3,	13.6	1
153	Visualization of Current and Mapping of Elements in Quantum Dot Solar Cells. *Advanced Functional Materials*, **2016**, 26, 895-902	15.6	1
152	Atomic and Electronic Structure of Fe2O3/Cu2O Heterostructured Nanocrystals. *Microscopy and Microanalysis*, **2014**, 20, 410-411	0.5	1
151	Column-by-Column Imaging of Dislocation Slip Processes in CdTe. *Microscopy and Microanalysis*, **2014**, 20, 1054-1055	0.5	1
150	Three-Dimensional Point Defect Imaging by Large-angle Illumination STEM. *Microscopy and Microanalysis*, **2017**, 23, 424-425	0.5	1
149	Understanding Individual Defects in CdTe Solar Cells: From Atomic Structure to Electrical Activity. *Microscopy and Microanalysis*, **2014**, 20, 518-519	0.5	1
148	Transmission Electron Microscopy **2012**, 9-44		1
147	Transmission Electron Microscopy as Nanolab **2012**, 345-374		1
146	In situ Transmission Electron Microscopy on Metals **2012**, 1099-1151		1
145	The Past, the Present, and the Future of Nanoscopy **2012**, 1-8		1
144	Electron Holography **2012**, 153-220		1
143	Nanoparticles **2012**, 877-960		1
142	Exploring semiconductor quantum dots and wires by high resolution electron microscopy. *Journal of Physics: Conference Series*, **2010**, 209, 012004	0.3	1
141	The spatial resolution of core-loss imaging in the STEM. *Journal of Physics: Conference Series*, **2006**, 26, 13-16	0.3	1
140	Probing Nanostructures Site by Site with the Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2003**, 9, 2-3	0.5	1
139	Nanoscale Structure/Property Correlation Through Aberration-Corrected Stem and Theory. *Materials Research Society Symposia Proceedings*, **2002**, 738, 111		1

138	Study of Chromium-Doped Diamond-Like Carbon by Z-Contrast Imaging and Electron Energy Loss Spectroscopy. *Materials Research Society Symposia Proceedings*, **1999**, 593, 329	1
137	Z-Contrast Stem Imaging and Eels of CdSe Nanocrystals: Towards the Analysis of Individual Nanocrystal Surfaces. *Materials Research Society Symposia Proceedings*, **1999**, 571, 305	1
136	Nanocrystal Thickness Information from Z-Stem: 3-D Imaging in One Shot. *Materials Research Society Symposia Proceedings*, **1999**, 589, 229	1
135	Microscopic and Theoretical Investigations of the Si-SiO2 Interface. *Materials Research Society Symposia Proceedings*, **1999**, 592, 42	1
134	Mechanisms of Single-Wall Carbon Nanotube Growth by the Laser Vaporization Technique: In Situ Imaging and Spectroscopy. *Materials Research Society Symposia Proceedings*, **1999**, 593, 3	1
133	Incoherent Imaging by Z-Contrast Stem: Towards 1Å Resolution. *Materials Research Society Symposia Proceedings*, **1994**, 332, 607	1
132	Simulation and Quantification of High-Resolution Z-Contrast Imaging of Semiconductor Interfaces. *Materials Research Society Symposia Proceedings*, **1989**, 159, 439	1
131	Direct Imaging of the Atomic Structure and Chemistry of Defects and Interfaces by Z-Contrast Stem. *Materials Research Society Symposia Proceedings*, **1989**, 169, 765	1
130	Incoherent Imaging of Materials Structure and Composition by Z-Contrast Stem. *Materials Research Society Symposia Proceedings*, **1990**, 183, 211	1
129	uperconductivity in Nonsymmetric Epitaxial YBa2Cu3O7-δ PrBa2Cu3O7-δ Superlattices Grown by Pulsed Laser Ablation. *Materials Research Society Symposia Proceedings*, **1990**, 191, 153	1
128	Formation Of Stable Point Defects in Ion-Implanted Si. *Materials Research Society Symposia Proceedings*, **1986**, 74, 391	1
127	Structural and Chemical Imaging of Superconductors and Semiconductors by High-Resolution Stem. *Materials Research Society Symposia Proceedings*, **1988**, 138, 329	1
126	High Resolution Z-Contrast Imaging and Lattice Location Analysis of Dopants in Ion-Implanted Silicon. *Materials Research Society Symposia Proceedings*, **1984**, 41, 287	1
125	Electron Microscopy at Very High Resolution **2008**, 1217-1229	1
124	Correlation of Transport Properties with Grain Boundary Atomic Structure in High Tc Superconducting Films and Tapes **1998**, 1015-1018	1
123	Atomic Imaging of Crystals using Large-Angle Electron Scattering in STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1990**, 48, 74-75	1
122	Z-contrast imaging of an ordered interface structure in the Si/CoSi2/Si system. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1993**, 51, 802-803	1
121	Atomic resolution characterisation of interface structures by Electron Energy Loss Spectroscopy. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1993**, 51, 576-577	1

120	Coherent Electron Diffractive Imaging437-472		1
119	Statistical Parameter Estimation Theory A Tool for Quantitative Electron Microscopy281-308		1
118	Nanowires and Nanotubes961-993		1
117	Spin-Polarized Low-Energy Electron Microscopy697-707		1
116	Memory Devices: MoS2/Polymer Heterostructures Enabling Stable Resistive Switching and Multistate Randomness (Adv. Mater. 42/2020). *Advanced Materials*, **2020**, 32, 2070317	24	1
115	APT mass spectrometry and SEM data for CdTe solar cells. *Data in Brief*, **2016**, 7, 779-785	1.2	1
114	Decoding the Structural Origin of Piezoelectric and Thermoelectric Materials with Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2018**, 24, 72-73	0.5	1
113	Speckles in Images and Diffraction Patterns405-435		1
112	Ultrahigh-Resolution Transmission Electron Microscopy at Negative Spherical Aberration81-107		1
111	Z-Contrast Imaging109-152		1
110	Learning motifs and their hierarchies in atomic resolution microscopy.. *Science Advances*, **2022**, 8, eabk1005	14.3	1
109	Designing Energy Materials via Atomic-resolution Microscopy and Spectroscopy. *Microscopy and Microanalysis*, **2019**, 25, 1998-1999	0.5	0
108	Topological Hall Effect: Emergent Topological Hall Effect at a Charge-Transfer Interface (Small 50/2020). *Small*, **2020**, 16, 2070273	11	0
107	Scanning Probe Microscopy History, Background, and State of the Art499-538		0
106	Correlated cation lattice symmetry and oxygen octahedral rotation in perovskite oxide heterostructures. *Journal of Applied Physics*, **2021**, 129, 025303	2.5	0
105	Metal-Organic Frameworks: Solution-Processable Metal Organic Framework Nanosheets with Variable Functionalities (Adv. Mater. 29/2021). *Advanced Materials*, **2021**, 33, 2170228	24	0
104	In-situ derived highly active NiS2 and MoS2 nanosheets on NiMoO4 microcuboids via controlled surface sulfidation for high-current-density hydrogen evolution reaction. *Electrochimica Acta*, **2021**, 389, 138733	6.7	0
103	Accurate and Robust Calibration of the Uniform Affine Transformation Between Scan-Camera Coordinates for Atom-Resolved In-Focus 4D-STEM Datasets.. *Microscopy and Microanalysis*, **2022**, 1-11	0.5	0

102	Tracking Atoms, Vacancies and Electrons via Aberration-corrected Microscopy and First-Principles Theory **2016**, 964-965	
101	Atomic scale studies of La/Sr ordering in La2-2xSr1+2xMn2O7 single crystals **2016**, 1076-1077	
100	Atomic Resolution Characterization of Semiconductor Materials by Aberration-Corrected Transmission Electron Microscopy ? **2017**,	
99	Engineering and Modifying Two-Dimensional Materials via Electron Beams. *Microscopy and Microanalysis*, **2019**, 25, 1474-1475	0.5
98	Observation of an Emerging Charged Domain Wall at a Non-ferroelectric Heterointerface with Aberration-corrected STEM. *Microscopy and Microanalysis*, **2019**, 25, 672-673	0.5
97	Titelbild: On-Chip Tailorability of Capacitive Gas Sensors Integrated with Metal Organic Framework Films (Angew. Chem. 40/2019). *Angewandte Chemie*, **2019**, 131, 14137-14137	3.6
96	Tracking Dopant Diffusion Pathways inside Bulk Materials. *Microscopy and Microanalysis*, **2014**, 20, 50-51	0.5
95	Study of Oxygen Distortions in Titanate - Manganite Interfaces by Aberration Corrected STEM-EELS. *Microscopy and Microanalysis*, **2014**, 20, 54-55	0.5
94	Inelastic STEM Imaging Based on Low-Loss Spectroscopy. *Microscopy and Microanalysis*, **2014**, 20, 90-91	0.5
93	Atomic Imaging and Spectroscopy of Two-Dimensional Materials. *Microscopy and Microanalysis*, **2014**, 20, 92-93	0.5
92	Quantification of Dopant Distribution and the Local Band Gap in Selenium-Doped Molybdenum Disulfide. *Microscopy and Microanalysis*, **2014**, 20, 1754-1755	0.5
91	Atomic Resolution STEM-EELS Studies of Defects and Local Structural Distortions in Oxide Interfaces. *Microscopy and Microanalysis*, **2017**, 23, 372-373	0.5
90	High Resolution Studies of Oxide Multiferroic Interfaces in the Aberration-Corrected STEM. *Microscopy and Microanalysis*, **2017**, 23, 1592-1593	0.5
89	Direct Observation of Plasmonic Enhancement of Emission in Ag-nanoparticle-decorated ZnO nanostructures. *Microscopy and Microanalysis*, **2015**, 21, 2389-2390	0.5
88	Probing Plasmons in Three Dimensions within Random Morphology Nanostructures. *Microscopy and Microanalysis*, **2015**, 21, 1683-1684	0.5
87	Quantitative Electron Microscopy and the Application by Single Electron Signals. *Microscopy and Microanalysis*, **2015**, 21, 1449-1450	0.5
86	Probing Complex Nanostructures by Combining Atomic-Scale Theory and Scanning Transmission Electron Microscopy. *Microscopy and Microanalysis*, **2015**, 21, 2199-2200	0.5
85	Pushing the Limits of Cathodoluminescence Signal Detection: Analyzing 2D Materials. *Microscopy and Microanalysis*, **2015**, 21, 2049-2050	0.5

84	The Role of Ledge Nucleation/Migration in Plate Thickening Behaviour in Al-Cu-Mg-Ag Alloys **2013**, 13-23	
83	Carbon Nanoforms **2012**, 995-1070	
82	Ferroic and Multiferroic Materials **2012**, 1273-1301	
81	Small Organic Molecules and Higher Homologs **2012**, 1335-1380	
80	Nanosession: Ferroelectric Interfaces **2013**, 399-408	
79	Three-Dimensional Imaging of Biomaterials with Electron Tomography **2012**, 1303-1333	
78	Electron Techniques, Introduction **2012**, 1	
77	Atomic Resolution Electron Energy Loss Spectroscopy of Interfaces. *Microscopy and Microanalysis*, **1997**, 3, 947-948	0.5
76	${hbox{YBa}}_{2}{hbox{Cu}}_{3}{hbox{O}}_{7{hbox{-}}delta}$ Formation by Processing of Laser-Ablated, Fluorine-Free Precursor Films. *IEEE Transactions on Applied Superconductivity*, **2007**, 17, 3624-3627	1.8
75	Tomographic Imaging of Nanocrystals by Aberration-Corrected Scanning Transmission Electron Microscopy. *Materials Research Society Symposia Proceedings*, **2004**, 839, 178	
74	Local Structural Variations in A172M20Co8 Decagonal Quasicrystals. *Materials Research Society Symposia Proceedings*, **2003**, 805, 248	
73	Imaging And Spectroscopy Of Nanostructures Through Aberration-Corrected Stem. *Materials Research Society Symposia Proceedings*, **2005**, 877, 1	
72	Z-contrast Imaging and EELS of Dislocation Cores at the Si/GaAs Interface. *Materials Research Society Symposia Proceedings*, **2002**, 744, 1	
71	Chromium and Lanthanum on Transition Alumina Surfaces: The Role of Bulk Point-Defect Distributions on Catalytic Activity. *Materials Research Society Symposia Proceedings*, **2002**, 751, 1	
70	The Origin of Electrical Activity at Grain Boundaries in Perovskites and Related Materials. *Materials Research Society Symposia Proceedings*, **2000**, 654, 131	
69	Determination of the Electronic Structures of Screw and Edge Dislocations in Gan Using Atomic Resolution EELS. *Microscopy and Microanalysis*, **2000**, 6, 190-191	0.5
68	The Role of Non-Stoichiometry in the Electrical Activity of Grain Boundaries in SrTiO3. *Microscopy and Microanalysis*, **2000**, 6, 184-185	0.5
67	Core Hole Effects on Eels Near-Edge Fine Structure in Semiconductors and Insulators. *Microscopy and Microanalysis*, **2001**, 7, 1174-1175	0.5

66	Non-Stoichiometry at Dislocation Cores in Perovskites and Related Materials. *Microscopy and Microanalysis*, **2001**, 7, 306-307	0.5
65	The Si/SiO2 Interface: Atomic Structures, Composition, Strain and Energetics. *Microscopy and Microanalysis*, **2001**, 7, 768-769	0.5
64	Critical Currents at Grain Boundaries in High Temperature Superconductors. *Materials Research Society Symposia Proceedings*, **2001**, 689, 1	
63	Chemical Disorder and Columnar Vacancies in Ideal Decagonal AL-NI-CO Quasicrystals. *Materials Research Society Symposia Proceedings*, **1998**, 553, 189	
62	In Situ Diagnostics of Nanomaterial Synthesis by Laser Ablation: Time-resolved Photoluminescence Spectra and Imaging of Gas-Suspended Nanoparticles Deposited for Thin Films. *Materials Research Society Symposia Proceedings*, **1998**, 536, 359	
61	Complex Atomic-Scale Structures in Solids by a Combination of Theory and Microscopy. *Microscopy and Microanalysis*, **1998**, 4, 760-761	0.5
60	Atomic-Resolution Z-Contrast Imaging Of Decagonal Quasicrystals: A Nucleation And Growth Mechanism. *Microscopy and Microanalysis*, **1999**, 5, 192-193	0.5
59	The Origin Of Electrical Activity At Grain Boundaries In Perovskites. *Microscopy and Microanalysis*, **1999**, 5, 110-111	0.5
58	Z-Contrast Stem Imaging and Eels of CdSe Nanocrystals: Towards the Analysis of Individual Nanocrystal Surfaces. *Materials Research Society Symposia Proceedings*, **1999**, 581, 503	
57	Atomic-Resolution Z-Contrast Imaging and Its Application to Compositional Ordering and Segregation. *Materials Research Society Symposia Proceedings*, **1999**, 583, 235	
56	Relationship Between Structure and Luminescent Properties of Epitaxial Grown Y2O3:Eu Thin Films on LaAlO3 Substrates. *Materials Research Society Symposia Proceedings*, **1999**, 589, 203	
55	Theoretical Explanation of Pt Trimers Observed by Z-Contrast STEM. *Materials Research Society Symposia Proceedings*, **1999**, 589, 241	
54	Atomic Scale Analysis of Cubic Zirconia Grain Boundaries. *Materials Research Society Symposia Proceedings*, **1999**, 589, 323	
53	Cooperative Chemical Rebonding in the Segregation of Impurities in Silicon Grain Boundaries. *Materials Research Society Symposia Proceedings*, **1996**, 442, 213	
52	Determination of the Three-Dimensional Atomic Structure at Internal Interfaces by Electron Energy Loss Spectroscopy. *Materials Research Society Symposia Proceedings*, **1996**, 466, 13	
51	Determination of Atomic Structure at Surfaces and Interfaces by High-Resolution Stem. *Materials Research Society Symposia Proceedings*, **1996**, 466, 3	
50	A Combined-Techniques Approach to Elucidating Crystalline Interface Atomic Structure. *Materials Research Society Symposia Proceedings*, **1996**, 466, 45	
49	Ab Initio Study of the Ge Adsorption and Diffusion on Si(100) Surface. *Materials Research Society Symposia Proceedings*, **1993**, 317, 9	

48	Atomic-Resolution Chemical Analysis at 100 Kv in the Scanning Transmission Electron Microscope. *Materials Research Society Symposia Proceedings*, **1994**, 332, 297	
47	Ab Initio Study of Epitaxial Growth on a Si(100) Surface in the Presence of Steps. *Materials Research Society Symposia Proceedings*, **1995**, 408, 439	
46	Imaging in Materials Science. *MRS Bulletin*, **1991**, 16, 19-21	3.2
45	Step-Driven Surface Segregation and Ordering During Si-Ge MBE Growth. *Materials Research Society Symposia Proceedings*, **1992**, 263, 9	
44	Application of Z-Contrast Imaging to Obtain Column-by-Column Spectroscopic Analysis of Materials. *Materials Research Society Symposia Proceedings*, **1992**, 295, 279	
43	Structural and Chemical Imaging of Superconductors and Semiconductors by High-Resolution Stem. *Materials Research Society Symposia Proceedings*, **1989**, 139, 39	
42	Shallow Junction Formation in As-Implanted Si by Low-Temperature Rapid Thermal Annealing. *Materials Research Society Symposia Proceedings*, **1989**, 147, 19	
41	Superconducting transport properties and surface microstructure for YBa2Cu3O7-□based superlattices grown by pulsed laser deposition. *Lecture Notes in Physics*, **1991**, 311-319	0.8
40	Microstructural Characterization of □Al2O3 Implanted with Iron. *Materials Research Society Symposia Proceedings*, **1988**, 138, 119	
39	Heteroepitaxy of GaAs on Si and Ge by low-Energy ion Beam Deposition Using Alternating Beams. *Materials Research Society Symposia Proceedings*, **1988**, 144, 311	
38	Point defect Supersaturation and Enhanced Diffusion in SPE Regrown Silicon.*. *Materials Research Society Symposia Proceedings*, **1983**, 27, 293	
37	Transient Enhanced Diffusion and Gettering of Dopants in Ion Implanted Silicon. *Materials Research Society Symposia Proceedings*, **1984**, 36, 151	
36	Formation of Suicides by Rapid Thermal Annealing over Polycrystalline Silicon. *Materials Research Society Symposia Proceedings*, **1985**, 54, 753	
35	Aberration-corrected scanning transmission electron microscopy: the potential for nano- and interface science. *International Journal of Materials Research*, **2022**, 94, 350-357	0.5
34	TEM characterization of InAs/GaAs quantum dots capped by a GaSb/GaAs layer **2008**, 45-46	
33	High-resolution z-contrast imaging of YBa2Cu3O7-□grain boundaries. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1989**, 47, 198-199	
32	Sub-□gstrom and 3-dimensional STEM for semiconductor research. *Springer Proceedings in Physics*, **2005**, 459-462	0.2
31	Flexible Ferroelectrics: Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity (Adv. Mater. 50/2020). *Advanced Materials*, **2020**, 32, 2070377	24

30 Studies of segregation by Z-contrast STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1988**, 46, 614-615

29 High-resolution Z-contrast imaging in the STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1990**, 48, 394-395

28 Misfit accommodation in epitaxial Ge films on Si. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1990**, 48, 340-341

27 Compositional mapping using large-angle electron scattering. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1991**, 49, 10-11

26 Structural and compositional mapping at Si-Ge interfaces using Z-contrast STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1991**, 49, 800-801

25 Column-by-column compositional imaging by z-contrast STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1992**, 50, 1470-1471

24 Determination of interface structure and bonding at atomic resolution in the STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1994**, 52, 734-735

23 Microscopy of stress-induced morphological development and dislocation nucleation during semiconductor epitaxy. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1994**, 52, 524-525

22 Direct retrieval of crystal structures by maximum-entropy analysis of incoherent Z-contrast images. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1994**, 52, 916-917

21 Atomic-resolution characterization of an SrTiO3 grain boundary in the STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1994**, 52, 972-973

20 Correlating imaging and spectroscopy at atomic resolution in the STEM. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1995**, 53, 78-79

19 Atomic resolution determination of the structure and chemistry of ceramic grain boundaries. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1995**, 53, 320-321

18 Microanalysis at Atomic Resolution **1996**, 195-207

17 Atomic-resolution eels for composition and 3-D coordination determination at interfaces and defects. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1996**, 54, 530-531

16 Determining Atomic Structure-Property Relationships at Grain Boundaries. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1996**, 54, 334-335

15 Aberration-Corrected Z-Contrast STEM **2008**, 1-21

14 Semiconductors and Semiconducting Devices1153-1178

13 Complex Oxide Materials1179-1212

12	Fundamentals of the Focused Ion Beam System645-671	
11	Atom Probe Tomography: Principle and Applications793-832	
10	Low-Energy Electron Microscopy673-696	
9	Signal and Noise Maximum Likelihood Estimation in MRI833-853	
8	Metals and Alloys1071-1097	
7	Application of Transmission Electron Microscopy in the Research of Inorganic Photovoltaic Materials1213-1246	
6	3-D Surface Reconstruction from Stereo Scanning Electron Microscopy Images855-876	
5	Scanning Beam Methods615-643	
4	Investigating Cu diffusion in CdTe solar cells via aberration-corrected STEM: Cu2-xTe precipitates at CdTe twins and the CdTe/CdS interface **2016**, 798-799	
3	Atom Probe Tomography of Interfacial Segregation in CdTe-based Solar Cells. *Microscopy and Microanalysis*, **2016**, 22, 646-647	0.5
2	Single Atom Imaging and Spectroscopy of Impurities in 2D Materials. *Microscopy and Microanalysis*, **2016**, 22, 862-863	0.5
1	Hole-Induced Spontaneous Mutual Annihilation of Dislocation Pairs. *Journal of Physical Chemistry Letters*, **2019**, 10, 7421-7425	6.4