

David A Muller

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/9158238/david-a-muller-publications-by-year.pdf>

Version: 2024-04-27

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

482
papers

42,058
citations

97
h-index

198
g-index

515
ext. papers

47,766
ext. citations

9.8
avg, IF

7.37
L-index

#	Paper	IF	Citations
482	Robotic four-dimensional pixel assembly of van der Waals solids.. <i>Nature Nanotechnology</i> , 2022 ,	28.7	7
481	Liberating a hidden antiferroelectric phase with interfacial electrostatic engineering.. <i>Science Advances</i> , 2022 , 8, eabg5860	14.3	3
480	Electrocatalysis in Alkaline Media and Alkaline Membrane-Based Energy Technologies.. <i>Chemical Reviews</i> , 2022 ,	68.1	25
479	Very-High Dynamic Range, 10,000 Frames/Second Pixel Array Detector for Electron Microscopy.. <i>Microscopy and Microanalysis</i> , 2022 , 1-16	0.5	1
478	Room-temperature skyrmion lattice in a layered magnet (FeCo)GeTe.. <i>Science Advances</i> , 2022 , 8, eabm7103	10.3	10
477	A completely precious metal-free alkaline fuel cell with enhanced performance using a carbon-coated nickel anode.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2119883119	11.5	2
476	Metal Monolayers on Command: Underpotential Deposition at Nanocrystal Surfaces: A Quantitative Operando Electrochemical Transmission Electron Microscopy Study. <i>ACS Energy Letters</i> , 2022 , 7, 1292-1297	20.1	1
475	Absence of Anti-RBD Antibodies in SARS-CoV-2 Infected or Naive Individuals Prior to Vaccination with CoronaVac Leads to Short Protection of Only Four Months Duration. <i>Vaccines</i> , 2022 , 10, 690	5.3	0
474	Structural and electronic properties of NbN/GaN junctions grown by molecular beam epitaxy. <i>APL Materials</i> , 2022 , 10, 051103	5.7	0
473	Cilia metasurfaces for electronically programmable microfluidic manipulation. <i>Nature</i> , 2022 , 605, 681-686	50.4	10
472	Coexisting ferromagnetic-antiferromagnetic state in twisted bilayer CrI. <i>Nature Nanotechnology</i> , 2021 ,	28.7	14
471	Homoepitaxial EGa2O3 transparent conducting oxide with conductivity $\approx 2323 \text{ S cm}^{-1}$. <i>APL Materials</i> , 2021 , 9, 101105	5.7	5
470	Adsorption-controlled growth of Ga2O3 by suboxide molecular-beam epitaxy. <i>APL Materials</i> , 2021 , 9, 031101	5.7	11
469	Micrometer-sized electrically programmable shape-memory actuators for low-power microrobotics. <i>Science Robotics</i> , 2021 , 6,	18.6	19
468	DyFe2O4: A new trigonal rare-earth ferrite grown by molecular-beam epitaxy. <i>APL Materials</i> , 2021 , 9, 041106	5.7	1
467	Dimensionality-Induced Change in Topological Order in Multiferroic Oxide Superlattices. <i>Physical Review Letters</i> , 2021 , 126, 157601	7.4	3
466	Electron ptychography achieves atomic-resolution limits set by lattice vibrations. <i>Science</i> , 2021 , 372, 826-831	33.3	34

465	Epitaxial Thin-Film Spinel Oxides as Oxygen Reduction Electrocatalysts in Alkaline Media. <i>Chemistry of Materials</i> , 2021 , 33, 4006-4013	9.6	5
464	Phase inclusions as common structural defects in alloyed $\text{Al}_x\text{Ga}_{1-x}\text{O}_3$ and doped Ga_2O_3 films. <i>APL Materials</i> , 2021 , 9, 051119	5.7	7
463	Rapid and Semi-Automated Analysis of 4D-STEM data via Unsupervised Learning. <i>Microscopy and Microanalysis</i> , 2021 , 27, 58-59	0.5	1
462	Probing the dynamics of ferroelectric topological oscillators with the electron beam. <i>Microscopy and Microanalysis</i> , 2021 , 27, 690-692	0.5	0
461	High-conductivity polarization-induced 2D hole gases in undoped GaN/AlN heterojunctions enabled by impurity blocking layers. <i>Journal of Applied Physics</i> , 2021 , 130, 025703	2.5	7
460	Multislice electron ptychography enables lattice vibration-limited resolution and linear phase-contrast imaging in thick samples. <i>Microscopy and Microanalysis</i> , 2021 , 27, 754-756	0.5	
459	Dose-efficient strain mapping with high precision and throughput using cepstral transforms on 4D-STEM data. <i>Microscopy and Microanalysis</i> , 2021 , 27, 1994-1996	0.5	1
458	Aberration Corrector Tuning with Machine-Learning-Based Emittance Measurements and Bayesian Optimization. <i>Microscopy and Microanalysis</i> , 2021 , 27, 810-812	0.5	0
457	Emergent chirality in a polar meron to skyrmion transition revealed by 4D-STEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 348-350	0.5	2
456	Local negative permittivity and topological phase transition in polar skyrmions. <i>Nature Materials</i> , 2021 , 20, 194-201	27	33
455	Crystal orientation dictated epitaxy of ultrawide-bandgap 5.4- to 8.6-eV AlGaO on m-plane sapphire. <i>Science Advances</i> , 2021 , 7,	14.3	35
454	Operando Methods in Electrocatalysis. <i>ACS Catalysis</i> , 2021 , 11, 1136-1178	13.1	49
453	Improved control of atomic layering in perovskite-related homologous series. <i>APL Materials</i> , 2021 , 9, 021118	5.7	4
452	An all-epitaxial nitride heterostructure with concurrent quantum Hall effect and superconductivity. <i>Science Advances</i> , 2021 , 7,	14.3	4
451	Unexplored MBE growth mode reveals new properties of superconducting NbN. <i>Physical Review Materials</i> , 2021 , 5,	3.2	5
450	Revealing the Nanostructure of Mesoporous Fuel Cell Catalyst Supports for Durable, High-Power Performance. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 024512	3.9	10
449	How many detector pixels do we need for super-resolution ptychography?. <i>Microscopy and Microanalysis</i> , 2021 , 27, 620-622	0.5	0
448	Dose-efficient tcBF-STEM imaging with real-space information beyond the scan sampling limit. <i>Microscopy and Microanalysis</i> , 2021 , 27, 758-760	0.5	0

447	Elucidating Cathodic Corrosion Mechanisms with Operando Electrochemical Liquid-Cell STEM in Multiple Dimensions. <i>Microscopy and Microanalysis</i> , 2021 , 27, 238-240	0.5	3
446	Wide Dynamic Range, 10 kHz Framing Detector for 4D-STEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 992-993	0.5	0
445	Three-dimensional imaging of single dopants inside crystals using multislice electron ptychography. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2146-2148	0.5	1
444	Thermal stability of epitaxial β -Ga ₂ O ₃ and (Al,Ga) ₂ O ₃ layers on m-plane sapphire. <i>Applied Physics Letters</i> , 2021 , 119, 062102	3.4	8
443	Atomically Thin, Optically Isotropic Films with 3D Nanotopography. <i>Nano Letters</i> , 2021 , 21, 7291-7297	11.5	
442	Imaging the spin chirality of ferrimagnetic Néel skyrmions stabilized on topological antiferromagnetic Mn ₃ Sn. <i>Physical Review Materials</i> , 2021 , 5,	3.2	4
441	Strong effect of scandium source purity on chemical and electronic properties of epitaxial ScxAl1-xN/GaN heterostructures. <i>APL Materials</i> , 2021 , 9, 091106	5.7	3
440	Extremely anisotropic van der Waals thermal conductors. <i>Nature</i> , 2021 , 597, 660-665	50.4	20
439	Momentum-resolved electronic structure and band offsets in an epitaxial NbN/GaN superconductor/semiconductor heterojunction.. <i>Science Advances</i> , 2021 , 7, eabi5833	14.3	3
438	Organo-organic and organo-mineral interfaces in soil at the nanometer scale. <i>Nature Communications</i> , 2020 , 11, 6103	17.4	27
437	Machine Learning for Phase Retrieval from 4D-STEM Data. <i>Microscopy and Microanalysis</i> , 2020 , 26, 8-9	0.5	
436	Efficient Phase-contrast Imaging via Mixed-state Electron Ptychography: From Crystal Structures to Electromagnetic Fields. <i>Microscopy and Microanalysis</i> , 2020 , 26, 26-28	0.5	0
435	Mapping Stacking and Stacking Defects in the 2D Ferromagnet CrI ₃ . <i>Microscopy and Microanalysis</i> , 2020 , 26, 636-638	0.5	1
434	Mapping Topological Dipole Textures, Chirality, and the Potential Energy Landscape of Polar Skyrmions Using 4D-STEM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 968-970	0.5	0
433	Dose-Efficient Cryo-STEM Imaging of Vitrified Biological Samples. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1482-1483	0.5	1
432	Sub-ångstrom EDX Mapping Enabled by a High-brightness Cold Field Emission Source. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1508-1511	0.5	2
431	A Robust Basis for Grain Identification in Polycrystalline Thin Film Devices Using Cepstrum Transforms of 4D-STEM Diffraction Pattern. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1620-1622	0.5	
430	Machine Learning for Sub-pixel Super-resolution in Direct Electron Detectors. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1932-1934	0.5	1

429	Determining the Chirality of Néel-type Magnetic Skyrmions by Phase Retrieval with Four-dimensional Lorentz Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2020 , 26, 2136-2137	0.5	1
428	Molecular beam homoepitaxy on bulk AlN enabled by aluminum-assisted surface cleaning. <i>Applied Physics Letters</i> , 2020 , 116, 172106	3.4	17
427	Tuning Electrical Conductance of MoS Monolayers through Substitutional Doping. <i>Nano Letters</i> , 2020 , 20, 4095-4101	11.5	59
426	Bidirectional Self-Folding with Atomic Layer Deposition Nanofilms for Microscale Origami. <i>Nano Letters</i> , 2020 , 20, 4850-4856	11.5	12
425	Mixed-state electron ptychography enables sub-angstrom resolution imaging with picometer precision at low dose. <i>Nature Communications</i> , 2020 , 11, 2994	17.4	22
424	The exit-wave power-spectrum transform for scanning nanobeam electron diffraction: robust strain mapping at subnanometer resolution and subpicometer precision. <i>Ultramicroscopy</i> , 2020 , 214, 112994	3.1	17
423	Imaging Polarity in Two Dimensional Materials by Breaking Friedel's Law. <i>Ultramicroscopy</i> , 2020 , 215, 113019	3.1	8
422	Interfacial Dzyaloshinskii-Moriya interaction arising from rare-earth orbital magnetism in insulating magnetic oxides. <i>Nature Communications</i> , 2020 , 11, 1090	17.4	37
421	Graphene-assisted spontaneous relaxation towards dislocation-free heteroepitaxy. <i>Nature Nanotechnology</i> , 2020 , 15, 272-276	28.7	32
420	Chiral Magnetism and High-Temperature Skyrmions in B20-Ordered Co-Si. <i>Physical Review Letters</i> , 2020 , 124, 057201	7.4	17
419	Electron tomography for functional nanomaterials. <i>MRS Bulletin</i> , 2020 , 45, 298-304	3.2	6
418	Exploring the intrinsic limit of the charge-carrier-induced increase of the Curie temperature of Lu- and La-doped EuO thin films. <i>Physical Review Materials</i> , 2020 , 4,	3.2	3
417	Cryogenic TcBF-STEM Imaging of Vitri-fied Apoferritin with the Electron Microscope Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1736-1738	0.5	
416	Operando control of skyrmion density in a Lorentz transmission electron microscope with current pulses. <i>Journal of Applied Physics</i> , 2020 , 128, 233902	2.5	2
415	A new era in ferroelectrics. <i>APL Materials</i> , 2020 , 8, 120902	5.7	12
414	Targeted chemical pressure yields tuneable millimetre-wave dielectric. <i>Nature Materials</i> , 2020 , 19, 176-181		14
413	Molecular Beam Epitaxy Growth of Large-Area GaN/AlN 2D Hole Gas Heterostructures. <i>Physica Status Solidi (B): Basic Research</i> , 2020 , 257, 1900567	1.3	9
412	Effects of Anisotropic Strain on Spin-Orbit Torque Produced by the Dirac Nodal Line Semimetal IrO. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 55411-55416	9.5	10

411	Site-specific spectroscopic measurement of spin and charge in (LuFeO) ₂ /(LuFeO) ₃ multiferroic superlattices. <i>Nature Communications</i> , 2020 , 11, 5582	17.4	2
410	Enhanced ORR Kinetics on Au-Doped Pt ₁₀₀ Porous Films in Alkaline Media. <i>ACS Catalysis</i> , 2020 , 10, 9967-9976	3.16	31
409	Imaging the Structure and Properties of 2D Materials with 4D-STEM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 624-626	0.5	
408	Determining Medium Range Atomic Ordering in Metallic Glasses Using 4D-STEM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 230-232	0.5	
407	Uncovering Atomic and Nano-scale Deformations in Two-dimensional Lateral Heterojunctions. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1630-1631	0.5	
406	Light-emitting diodes with AlN polarization-induced buried tunnel junctions: A second look. <i>Applied Physics Letters</i> , 2020 , 117, 061104	3.4	5
405	Electronically integrated, mass-manufactured, microscopic robots. <i>Nature</i> , 2020 , 584, 557-561	50.4	77
404	Structural and piezoelectric properties of ultra-thin Sc _x Al _{1-x} N films grown on GaN by molecular beam epitaxy. <i>Applied Physics Letters</i> , 2020 , 117, 112101	3.4	15
403	Cryo-STEM-EDX for Reliable Characterization of Sulfur Distribution and the Rational Design of Sulfur Hosts for Li-S Batteries. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1654-1658	0.5	2
402	Significantly reduced thermal conductivity in (Al _{0.1} Ga _{0.9}) ₂ O ₃ /Ga ₂ O ₃ superlattices. <i>Applied Physics Letters</i> , 2019 , 115, 092105	3.4	17
401	Scaling-up Atomically Thin Coplanar Semiconductor-Metal Circuitry via Phase Engineered Chemical Assembly. <i>Nano Letters</i> , 2019 , 19, 6845-6852	11.5	26
400	A polarization-induced 2D hole gas in undoped gallium nitride quantum wells. <i>Science</i> , 2019 , 365, 1454-1457	35.3	57
399	Revealing the atomic ordering of binary intermetallics using in situ heating techniques at multilength scales. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 1974-1983	11.5	64
398	Atomic Layer Deposition for Membranes, Metamaterials, and Mechanisms. <i>Advanced Materials</i> , 2019 , 31, e1901944	24	15
397	Real-time imaging of activation and degradation of carbon supported octahedral Pt ₃ Ni alloy fuel cell catalysts at the nanoscale using in situ electrochemical liquid cell STEM. <i>Energy and Environmental Science</i> , 2019 , 12, 2476-2485	35.4	82
396	2D Materials: Metal-Guided Selective Growth of 2D Materials: Demonstration of a Bottom-Up CMOS Inverter (Adv. Mater. 18/2019). <i>Advanced Materials</i> , 2019 , 31, 1970132	24	0
395	Exceptionally High, Strongly Temperature Dependent, Spin Hall Conductivity of SrRuO ₃ . <i>Nano Letters</i> , 2019 , 19, 3663-3670	11.5	24
394	Highly conductive and chemically stable alkaline anion exchange membranes via ROMP of α -cyclooctene derivatives. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 9729-9734	11.5	71

393	Observation of room-temperature polar skyrmions. <i>Nature</i> , 2019 , 568, 368-372	50.4	221
392	Metal-Guided Selective Growth of 2D Materials: Demonstration of a Bottom-Up CMOS Inverter. <i>Advanced Materials</i> , 2019 , 31, e1900861	24	28
391	Initial Feasibility Study of a New Transcatheter Mitral Prosthesis: The First 100 Patients. <i>Journal of the American College of Cardiology</i> , 2019 , 73, 1250-1260	15.1	106
390	Synergistic Mn-Co catalyst outperforms Pt on high-rate oxygen reduction for alkaline polymer electrolyte fuel cells. <i>Nature Communications</i> , 2019 , 10, 1506	17.4	128
389	Mitigation of PEM Fuel Cell Catalyst Degradation with Porous Carbon Supports. <i>Journal of the Electrochemical Society</i> , 2019 , 166, F198-F207	3.9	63
388	Epitaxial integration of high-mobility La-doped BaSnO ₃ thin films with silicon. <i>APL Materials</i> , 2019 , 7, 022520	5.7	17
387	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 3437-3442	11.5	25
386	Realization of Quantum Hall Effect in Chemically Synthesized InSe. <i>Advanced Functional Materials</i> , 2019 , 29, 1904032	15.6	16
385	Quantifying the Atomic Ordering of Binary Intermetallic Nanocatalysts Using In Situ Heating STEM and XRD. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1488-1489	0.5	1
384	Resolving Internal Magnetic Structures of Skyrmions by Lorentz Electron Ptychography. <i>Microscopy and Microanalysis</i> , 2019 , 25, 32-33	0.5	2
383	In Situ Modification of a Delafossite-Type PdCoO Bulk Single Crystal for Reversible Hydrogen Sorption and Fast Hydrogen Evolution. <i>ACS Energy Letters</i> , 2019 , 4, 2185-2191	20.1	19
382	Phase Imaging beyond the Diffraction Limit with Electron Ptychography. <i>Microscopy and Microanalysis</i> , 2019 , 25, 6-7	0.5	1
381	Sulfur encapsulation by MOF-derived CoS ₂ embedded in carbon hosts for high-performance LiS batteries. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 21128-21139	13	48
380	Micromechanical Systems: Atomic Layer Deposition for Membranes, Metamaterials, and Mechanisms (Adv. Mater. 29/2019). <i>Advanced Materials</i> , 2019 , 31, 1970212	24	
379	Ferroelectric Domain Walls in PbTiO Are Effective Regulators of Heat Flow at Room Temperature. <i>Nano Letters</i> , 2019 , 19, 7901-7907	11.5	23
378	Ultrahigh Rate Performance of a Robust Lithium Nickel Manganese Cobalt Oxide Cathode with Preferentially Orientated Li-Diffusing Channels. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 41178-41187 ¹⁰	9.5	118
377	Diffraction Mapping with a Pixelated Detector to Quantify Crystal Orientation in 3D Structures Made from 2D Materials. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1956-1957	0.5	
376	Cryogenic STEM Imaging and Spectroscopy of Electron Beam Sensitive Materials. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1660-1661	0.5	3

375	Sub-nm Resolution, Sub-pm Precision Structure Mapping Robust to Thickness and Tilt Variations by Cepstral Analysis of Scanning Nanodiffraction 4D-STEM. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1934-1935	0.5	1
374	Decoupling Polarization, Crystal Tilt and Symmetry in Epitaxially-Strained Ferroelectric Thin Films Using 4D-STEM. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1938-1939	0.5	3
373	Two-Dimensional Material Tunnel Barrier for Josephson Junctions and Superconducting Qubits. <i>Nano Letters</i> , 2019 , 19, 8287-8293	11.5	11
372	Unusual Formation of Point-Defect Complexes in the Ultrawide-Band-Gap Semiconductor Ga ₂ O ₃ . <i>Physical Review X</i> , 2019 , 9,	9.1	43
371	Wafer-scale synthesis of monolayer two-dimensional porphyrin polymers for hybrid superlattices. <i>Science</i> , 2019 , 366, 1379-1384	33.3	111
370	Growth of PdCoO ₂ by ozone-assisted molecular-beam epitaxy. <i>APL Materials</i> , 2019 , 7, 121112	5.7	17
369	Nano-folded Gold Catalysts for Electroreduction of Carbon Dioxide. <i>Nano Letters</i> , 2019 , 19, 9154-9159	11.5	17
368	Octahedral spinel electrocatalysts for alkaline fuel cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 24425-24432	11.5	27
367	Cryogenic electron microscopy for quantum science. <i>MRS Bulletin</i> , 2019 , 44, 961-966	3.2	10
366	Spatially resolved steady-state negative capacitance. <i>Nature</i> , 2019 , 565, 468-471	50.4	144
365	GaN/NbN epitaxial semiconductor/superconductor heterostructures. <i>Nature</i> , 2018 , 555, 183-189	50.4	83
364	Coherent, atomically thin transition-metal dichalcogenide superlattices with engineered strain. <i>Science</i> , 2018 , 359, 1131-1136	33.3	170
363	Pt-Rich/Sn-Rich/Pt Nanocubes As Highly Active and Stable Electrocatalysts for the Ethanol Oxidation Reaction. <i>Journal of the American Chemical Society</i> , 2018 , 140, 3791-3797	16.4	124
362	Editors' Choice Connecting Fuel Cell Catalyst Nanostructure and Accessibility Using Quantitative Cryo-STEM Tomography. <i>Journal of the Electrochemical Society</i> , 2018 , 165, F173-F180	3.9	59
361	Growth of LaAlO ₃ on silicon via an ultrathin SrTiO ₃ buffer layer by molecular-beam epitaxy. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2018 , 36, 021507	2.9	9
360	Tutorial on the Visualization of Volumetric Data Using tomviz. <i>Microscopy Today</i> , 2018 , 26, 12-17	0.4	24
359	Strain distributions and their influence on electronic structures of WSe-MoS laterally strained heterojunctions. <i>Nature Nanotechnology</i> , 2018 , 13, 152-158	28.7	135
358	Graphene-based bimorphs for micron-sized, autonomous origami machines. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 466-470	11.5	113

357	Sampling limits for electron tomography with sparsity-exploiting reconstructions. <i>Ultramicroscopy</i> , 2018 , 186, 94-103	3.1	7
356	Theory and practice of electron diffraction from single atoms and extended objects using an EMPAD. <i>Microscopy (Oxford, England)</i> , 2018 , 67, i150-i161	1.3	18
355	Electron ptychography of 2D materials to deep sub-ångström resolution. <i>Nature</i> , 2018 , 559, 343-349	50.4	269
354	Dynamic Hosts for High-Performance LiS Batteries Studied by Cryogenic Transmission Electron Microscopy and in Situ X-ray Diffraction. <i>ACS Energy Letters</i> , 2018 , 3, 1325-1330	20.1	39
353	Mapping Polarity, Toroidal Order, and the Local Energy Landscape by 4D-STEM. <i>Microscopy and Microanalysis</i> , 2018 , 24, 176-177	0.5	1
352	Porous Fe3O4 Nanospheres as Effective Sulfur Hosts for Li-S Batteries. <i>Journal of the Electrochemical Society</i> , 2018 , 165, A1656-A1661	3.9	19
351	Engineering Dzyaloshinskii-Moriya interaction in B20 thin-film chiral magnets. <i>Physical Review Materials</i> , 2018 , 2,	3.2	7
350	Exploring the limits of transistor scaling with electron microscopy 2018 , 1-10		
349	Correlative imaging reveals physiochemical heterogeneity of microcalcifications in human breast carcinomas. <i>Journal of Structural Biology</i> , 2018 , 202, 25-34	3.4	23
348	Sub-nanometre channels embedded in two-dimensional materials. <i>Nature Materials</i> , 2018 , 17, 129-133	27	75
347	Mapping the 3D Structure of Corrugated Cardboard™ MOS2. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1584-1585	0.5	
346	Breaking the Rayleigh Limit in Thick Samples with Multi-slice Ptychography. <i>Microscopy and Microanalysis</i> , 2018 , 24, 192-193	0.5	3
345	Real-space Demonstration of 0.4 Angstrom Resolution at 80 keV via Electron Ptychography with a High Dynamic Range Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2018 , 24, 194-195	0.5	
344	A Natural Basis for Unsupervised Machine Learning on Scanning Diffraction Data. <i>Microscopy and Microanalysis</i> , 2018 , 24, 490-491	0.5	1
343	Direct Imaging of Tilt Relaxation from the Interface in Epitaxially Strained Ca2RuO4 Thin Films using ABF-STEM. <i>Microscopy and Microanalysis</i> , 2018 , 24, 64-65	0.5	1
342	AirSEM: Electron Microscopy in Air, without a Specimen Chamber. <i>Microscopy and Microanalysis</i> , 2018 , 24, 342-343	0.5	
341	Probing Nanoscale Structural Heterogeneity in Metallic Glasses Using 4-D STEM. <i>Microscopy and Microanalysis</i> , 2018 , 24, 202-203	0.5	1
340	Mapping Strain and Relaxation in 2D Heterojunctions with Sub-picometer Precision. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1588-1589	0.5	

339	Cryo-STEM Imaging of Ribosomes Using the Electron Microscope Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2018 , 24, 876-877	0.5	2
338	Grains and Strains from Cepstral Analysis of 4D-STEM Nano-Diffraction Datasets. <i>Microscopy and Microanalysis</i> , 2018 , 24, 546-547	0.5	0
337	Gate-Recessed E-mode p-Channel HFET With High On-Current Based on GaN/AlN 2D Hole Gas. <i>IEEE Electron Device Letters</i> , 2018 , 39, 1848-1851	4.4	46
336	Mechanism of Gold-Assisted Exfoliation of Centimeter-Sized Transition-Metal Dichalcogenide Monolayers. <i>ACS Nano</i> , 2018 , 12, 10463-10472	16.7	99
335	Direct determination of structural heterogeneity in metallic glasses using four-dimensional scanning transmission electron microscopy. <i>Ultramicroscopy</i> , 2018 , 195, 189-193	3.1	24
334	In Situ-Generated Volatile Precursor for CVD Growth of a Semimetallic 2D Dichalcogenide. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 34401-34408	9.5	15
333	Synthetic Lateral Metal-Semiconductor Heterostructures of Transition Metal Disulfides. <i>Journal of the American Chemical Society</i> , 2018 , 140, 12354-12358	16.4	60
332	Electrical half-wave rectification at ferroelectric domain walls. <i>Nature Nanotechnology</i> , 2018 , 13, 1028-1034	13.7	57
331	Epitaxial integration and properties of SrRuO ₃ on silicon. <i>APL Materials</i> , 2018 , 6, 086101	5.7	12
330	Strain Mapping of Two-Dimensional Heterostructures with Subpicometer Precision. <i>Nano Letters</i> , 2018 , 18, 3746-3751	11.5	50
329	Intrinsic Two-Dimensional Ferroelectricity with Dipole Locking. <i>Physical Review Letters</i> , 2018 , 120, 227601	11.4	170
328	Simultaneous Quantification of Electron Transfer by Carbon Matrices and Functional Groups in Pyrogenic Carbon. <i>Environmental Science & Technology</i> , 2018 , 52, 8538-8547	10.3	52
327	Predicting LVOT Obstruction in Transcatheter Mitral Valve Implantation: Concept of the Neo-LVOT. <i>JACC: Cardiovascular Imaging</i> , 2017 , 10, 482-485	8.4	155
326	Characterization of Sulfur and Nanostructured Sulfur Battery Cathodes in Electron Microscopy Without Sublimation Artifacts. <i>Microscopy and Microanalysis</i> , 2017 , 23, 155-162	0.5	32
325	Janus monolayers of transition metal dichalcogenides. <i>Nature Nanotechnology</i> , 2017 , 12, 744-749	28.7	828
324	Reaction Kinetics of Germanium Nanowire Growth on Inductively Heated Copper Surfaces. <i>Chemistry of Materials</i> , 2017 , 29, 4792-4800	9.6	3
323	Rapid electron transfer by the carbon matrix in natural pyrogenic carbon. <i>Nature Communications</i> , 2017 , 8, 14873	17.4	223
322	Functional electronic inversion layers at ferroelectric domain walls. <i>Nature Materials</i> , 2017 , 16, 622-627	27	92

321	Electronic Structure of the Metastable Epitaxial Rock-Salt SnSe {111} Topological Crystalline Insulator. <i>Physical Review X</i> , 2017 , 7,	9.1	8
320	Influence of Aliovalent Substitutions on Oxygen Reduction on Tantalum Oxynitrides. <i>Journal of the Electrochemical Society</i> , 2017 , 164, F645-F650	3.9	3
319	Tuning the Electrocatalytic Oxygen Reduction Reaction Activity and Stability of Shape-Controlled Pt-Ni Nanoparticles by Thermal Annealing - Elucidating the Surface Atomic Structural and Compositional Changes. <i>Journal of the American Chemical Society</i> , 2017 , 139, 16536-16547	16.4	107
318	Electron Accumulation and Emergent Magnetism in LaMnO ₃ /SrTiO ₃ Heterostructures. <i>Physical Review Letters</i> , 2017 , 119, 156801	7.4	44
317	Detection of CdS Nanoparticles and Implications for Cadmium Yellow Paint Degradation in Edvard Munch's The Scream (c. 1910, Munch Museum). <i>Microscopy and Microanalysis</i> , 2017 , 23, 1910-1911	0.5	3
316	Enhanced Resolution from Full-Field Ptychography with an Electron Microscope Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2017 , 23, 438-439	0.5	
315	Measuring Ferroelectric Order Parameters at Domain Walls and Vortices in Hexagonal Manganites with Atomic Resolution STEM. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1636-1637	0.5	
314	Measuring Orbital Angular Momentum (OAM) and Torque Transfer from Polarization Vortices with the Electron Microscopy Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1634-1635	0.5	0
313	Dose-Efficient Cryo-STEM Imaging of Whole Cells Using the Electron Microscope Pixel Array Detector. <i>Microscopy and Microanalysis</i> , 2017 , 23, 804-805	0.5	6
312	Theory and Practice of Diffractometry on Single Tungsten Atoms using Electron Microscope Pixel Array Detectors. <i>Microscopy and Microanalysis</i> , 2017 , 23, 444-445	0.5	1
311	Chiral magnetic excitations in FeGe films. <i>Physical Review B</i> , 2017 , 95,	3.3	16
310	Layer-by-layer assembly of two-dimensional materials into wafer-scale heterostructures. <i>Nature</i> , 2017 , 550, 229-233	50.4	305
309	Tailoring Semiconductor Lateral Multijunctions for Giant Photoconductivity Enhancement. <i>Advanced Materials</i> , 2017 , 29, 1703680	24	17
308	Systematic Optimization of Battery Materials: Key Parameter Optimization for the Scalable Synthesis of Uniform, High-Energy, and High Stability LiNiMnCoO Cathode Material for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 35811-35819	9.5	52
307	Topological Defects in Hexagonal Manganites: Inner Structure and Emergent Electrostatics. <i>Nano Letters</i> , 2017 , 17, 5883-5890	11.5	41
306	Visualizing weak ferromagnetic domains in multiferroic hexagonal ferrite thin film. <i>Physical Review B</i> , 2017 , 95,	3.3	12
305	Reducing orbital occupancy in VO ₂ suppresses Mott physics while Peierls distortions persist. <i>Physical Review B</i> , 2017 , 96,	3.3	20
304	Chemical Vapor Deposition Growth of Large Single-Crystal Mono-, Bi-, Tri-Layer Hexagonal Boron Nitride and Their Interlayer Stacking. <i>ACS Nano</i> , 2017 , 11, 12057-12066	16.7	58

303	tomviz: Providing Advanced Electron Tomography by Streamlining Alignment, Reconstruction, and 3D Visualization. <i>Microscopy and Microanalysis</i> , 2017 , 23, 222-223	0.5	4
302	Depth-Dependent Contrast in Probability-Current Imaging from Channeling in Crystalline Materials. <i>Microscopy and Microanalysis</i> , 2017 , 23, 478-479	0.5	
301	Picometer-Precision Strain Mapping of Two-Dimensional Heterostructures using an Electron Microscope Pixel Array Detector (EMPAD). <i>Microscopy and Microanalysis</i> , 2017 , 23, 1712-1713	0.5	
300	Breaking Friedel's Law in Polar Two Dimensional Materials. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1738-1739	0.5	1
299	New Full-Range Electron Tomography Procedure for Accurate Quantification of Surfaces, Curvature, and Porosity in Energy-Related Nanomaterials. <i>Microscopy and Microanalysis</i> , 2017 , 23, 2002-2003	0.5	
298	A Simple Preparation Method for Full-Range Electron Tomography of Nanoparticles and Fine Powders. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1150-1158	0.5	8
297	Adsorption-controlled growth of La-doped BaSnO ₃ by molecular-beam epitaxy. <i>APL Materials</i> , 2017 , 5, 116107	5.7	98
296	Stability of the M2 phase of vanadium dioxide induced by coherent epitaxial strain. <i>Physical Review B</i> , 2016 , 94,	3.3	51
295	Atomically engineered ferroic layers yield a room-temperature magnetoelectric multiferroic. <i>Nature</i> , 2016 , 537, 523-7	50.4	221
294	Atomically Thin Graphene Windows That Enable High Contrast Electron Microscopy without a Specimen Vacuum Chamber. <i>Nano Letters</i> , 2016 , 16, 7427-7432	11.5	13
293	Spontaneous incorporation of gold in palladium-based ternary nanoparticles makes durable electrocatalysts for oxygen reduction reaction. <i>Nature Communications</i> , 2016 , 7, 11941	17.4	58
292	Advanced Platform for 3D Visualization, Reconstruction, and Segmentation with Electron Tomography. <i>Microscopy and Microanalysis</i> , 2016 , 22, 2070-2071	0.5	5
291	An Electron Microscope Pixel Array Detector as a Universal STEM Detector. <i>Microscopy and Microanalysis</i> , 2016 , 22, 478-479	0.5	4
290	Electron Diffraction from a Single Atom and Optimal Signal Detection. <i>Microscopy and Microanalysis</i> , 2016 , 22, 846-847	0.5	3
289	Reconstruction of Polarization Vortices by Diffraction Mapping of Ferroelectric PbTiO ₃ / SrTiO ₃ Superlattice Using a High Dynamic Range Pixelated Detector. <i>Microscopy and Microanalysis</i> , 2016 , 22, 472-473	0.5	5
288	Atomically Thin Ohmic Edge Contacts Between Two-Dimensional Materials. <i>ACS Nano</i> , 2016 , 10, 6392-9	16.7	144
287	Achieving High-Power PEM Fuel Cell Performance with an Ultralow-Pt-Content Core-Shell Catalyst. <i>ACS Catalysis</i> , 2016 , 6, 1578-1583	13.1	129
286	Reverse Engineering Cadmium Yellow Paint from Munch's "The Scream" with Correlative 3-D Spectroscopic and 4-D Crystallographic STEM. <i>Microscopy and Microanalysis</i> , 2016 , 22, 258-259	0.5	3

285	In Situ TEM for Electrochemical Energy Storage and Conversion Systems. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1326-1327	0.5	
284	An Extra Dimension In Electron Tomography: Automatic Parameter Determination for Next-generation Reconstruction Methods. <i>Microscopy and Microanalysis</i> , 2016 , 22, 556-557	0.5	1
283	Strain Accommodation and Coherency in Laterally-Stitched WSe ₂ /WS ₂ Junctions. <i>Microscopy and Microanalysis</i> , 2016 , 22, 870-871	0.5	5
282	Quantitative Information from Cryo Electron Tomography of Energy Materials. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1284-1285	0.5	
281	Quantitative Imaging of Probability Current Flow in Real and Momentum Space. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1414-1415	0.5	1
280	Large-scale chemical assembly of atomically thin transistors and circuits. <i>Nature Nanotechnology</i> , 2016 , 11, 954-959	28.7	201
279	Design Principles for Optimum Performance of Porous Carbons in Lithium-Sulfur Batteries. <i>Advanced Energy Materials</i> , 2016 , 6, 1600134	21.8	84
278	4D-STEM for Quantitative Imaging of Magnetic Materials with Enhanced Contrast and Resolution. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1718-1719	0.5	2
277	In Situ Electrochemical Cell TEM for Battery and Fuel Cell Systems. <i>Microscopy and Microanalysis</i> , 2016 , 22, 752-753	0.5	
276	Spatial Resolution in Scanning Electron Microscopy and Scanning Transmission Electron Microscopy Without a Specimen Vacuum Chamber. <i>Microscopy and Microanalysis</i> , 2016 , 22, 754-67	0.5	4
275	Nanomaterial datasets to advance tomography in scanning transmission electron microscopy. <i>Scientific Data</i> , 2016 , 3, 160041	8.2	36
274	High Dynamic Range Pixel Array Detector for Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2016 , 22, 237-49	0.5	222
273	Graphene Oxide Nanosheets Stimulate Ruffling and Shedding of Mammalian Cell Plasma Membranes. <i>Chem</i> , 2016 , 1, 273-286	16.2	22
272	Graphene kirigami. <i>Nature</i> , 2015 , 524, 204-7	50.4	551
271	Conductivity and Microstructure of Combinatorially Sputter-Deposited Ta _{1-x} Al _x Nitride Thin Films. <i>Chemistry of Materials</i> , 2015 , 27, 4515-4524	9.6	7
270	Multi-terminal transport measurements of MoS ₂ using a van der Waals heterostructure device platform. <i>Nature Nanotechnology</i> , 2015 , 10, 534-40	28.7	868
269	Multicomponent Nanomaterials with Complex Networked Architectures from Orthogonal Degradation and Binary Metal Backfilling in ABC Triblock Terpolymers. <i>Journal of the American Chemical Society</i> , 2015 , 137, 6026-33	16.4	61
268	High-mobility three-atom-thick semiconducting films with wafer-scale homogeneity. <i>Nature</i> , 2015 , 520, 656-60	50.4	1224

267	Controlling band alignments by artificial interface dipoles at perovskite heterointerfaces. <i>Nature Communications</i> , 2015 , 6, 6759	17.4	43
266	Enhancement of the anti-damping spin torque efficacy of platinum by interface modification. <i>Applied Physics Letters</i> , 2015 , 106, 222402	3.4	85
265	High-quality EuO thin films the easy way via topotactic transformation. <i>Nature Communications</i> , 2015 , 6, 7716	17.4	35
264	Tuning thermal conductivity in homoepitaxial SrTiO ₃ films via defects. <i>Applied Physics Letters</i> , 2015 , 107, 051902	3.4	31
263	Esaki Diodes in van der Waals Heterojunctions with Broken-Gap Energy Band Alignment. <i>Nano Letters</i> , 2015 , 15, 5791-8	11.5	237
262	Nanoscale assembly processes revealed in the nacreprismatic transition zone of <i>Pinna nobilis</i> mollusc shells. <i>Nature Communications</i> , 2015 , 6, 10097	17.4	54
261	Electron Microscopy in Air: Transparent Atomic Membranes and Imaging Modes. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1111-1112	0.5	5
260	In Situ TEM for Quantitative Electrochemistry of Energy Systems. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1509-1510	0.5	4
259	Transport properties of ultra-thin VO ₂ films on (001) TiO ₂ grown by reactive molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2015 , 107, 163101	3.4	74
258	21.4: Deposition Conditions and HRTEM Characterization of CAAC IGZO. <i>Digest of Technical Papers SID International Symposium</i> , 2015 , 46, 308-311	0.5	24
257	Quantitative Structural Analysis of Fuel Cell Catalysts and Carbon Supports by TEM and Cryo-STEM Tomography. <i>Microscopy and Microanalysis</i> , 2015 , 21, 799-800	0.5	
256	Repeatable and Transferable Processing for Electron Tomography: An Open Platform for Visualization and Reconstruction of 3D Materials. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2407-2408	0.5	7
255	Challenges for ABF-STEM characterization of Li battery materials. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1549-1550	0.5	0
254	Lorentz-STEM imaging of Fields and Domains using a High-Speed, High-Dynamic Range Pixel Array Detector at Atomic Resolution. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2309-2310	0.5	1
253	Epitaxial crystals of Bi ₂ Pt ₂ O ₇ pyrochlore through the transformation of Bi ₂ O ₃ fluorite. <i>APL Materials</i> , 2015 , 3, 036105	5.7	7
252	Magnetic structure and ordering of multiferroic hexagonal LuFeO ₃ . <i>Physical Review Letters</i> , 2015 , 114, 217602	7.4	74
251	Morphology and activity tuning of CuPt/C ordered intermetallic nanoparticles by selective electrochemical dealloying. <i>Nano Letters</i> , 2015 , 15, 1343-8	11.5	108
250	Elastic strain engineering of ferroic oxides. <i>MRS Bulletin</i> , 2014 , 39, 118-130	3.2	309

249	Visualizing the interfacial evolution from charge compensation to metallic screening across the manganite metal-insulator transition. <i>Nature Communications</i> , 2014 , 5, 3464	17.4	65
248	Hetero-epitaxial EuO interfaces studied by analytic electron microscopy. <i>Applied Physics Letters</i> , 2014 , 104, 091601	3.4	21
247	Crossover from incoherent to coherent phonon scattering in epitaxial oxide superlattices. <i>Nature Materials</i> , 2014 , 13, 168-72	27	327
246	Solid-solid phase transformations induced through cation exchange and strain in 2D heterostructured copper sulfide nanocrystals. <i>Nano Letters</i> , 2014 , 14, 7090-9	11.5	122
245	Thickness measurements using photonic modes in monochromated electron energy-loss spectroscopy. <i>Microscopy and Microanalysis</i> , 2014 , 20, 723-30	0.5	
244	Nanoparticle metamorphosis: an in situ high-temperature transmission electron microscopy study of the structural evolution of heterogeneous Au:Fe ₂ O ₃ nanoparticles. <i>ACS Nano</i> , 2014 , 8, 5315-22	16.7	11
243	Direct growth of germanium and silicon nanowires on metal films. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 1869	7.1	20
242	Tailoring the electronic structure in bilayer molybdenum disulfide via interlayer twist. <i>Nano Letters</i> , 2014 , 14, 3869-75	11.5	213
241	Atomically precise interfaces from non-stoichiometric deposition. <i>Nature Communications</i> , 2014 , 5, 4530	17.4	86
240	Is there a Stobbs factor in atomic-resolution STEM-EELS mapping?. <i>Ultramicroscopy</i> , 2014 , 139, 38-46	3.1	25
239	Breaking the Crowther limit: combining depth-sectioning and tilt tomography for high-resolution, wide-field 3D reconstructions. <i>Ultramicroscopy</i> , 2014 , 140, 26-31	3.1	32
238	Nanoscale imaging of lithium ion distribution during in situ operation of battery electrode and electrolyte. <i>Nano Letters</i> , 2014 , 14, 1453-9	11.5	204
237	Spatial Resolution of Scanning Electron Microscopy without a Vacuum Chamber. <i>Microscopy and Microanalysis</i> , 2014 , 20, 26-27	0.5	1
236	Characterizing Sulfur in TEM and STEM, with Applications to Lithium Sulfur Batteries. <i>Microscopy and Microanalysis</i> , 2014 , 20, 446-447	0.5	5
235	Tomography and Spectroscopy of Structure and Degradation in Carbon Electrode Materials for Energy Conversion and Storage. <i>Microscopy and Microanalysis</i> , 2014 , 20, 504-505	0.5	
234	High Resolution Optical and Vibrational Spectroscopy with Low Loss EELS. <i>Microscopy and Microanalysis</i> , 2014 , 20, 590-591	0.5	4
233	Compressed Sensing, Sparsity, and the Reliability of Tomographic Reconstructions. <i>Microscopy and Microanalysis</i> , 2014 , 20, 796-797	0.5	3
232	Atomic Imaging Across Strain Boundaries in Bilayer Graphene with ADF-STEM and DF-TEM. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1058-1059	0.5	

231	Nanoscale Imaging of Lithium Ion Distribution During In Situ Operation of a Battery Electrode and Electrolyte. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1524-1525	0.5	0
230	Phase Transitions, Domains Walls and Defects Dynamics of LaAlO ₃ via In Situ Heating in the Transmission Electron Microscope. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1556-1557	0.5	6
229	Characterization of reactively sputtered c-axis aligned nanocrystalline InGaZnO ₄ . <i>Applied Physics Letters</i> , 2014 , 105, 262103	3.4	36
228	Epitaxial growth of VO ₂ by periodic annealing. <i>Applied Physics Letters</i> , 2014 , 104, 063104	3.4	44
227	Intrinsic magnetic properties of hexagonal LuFeO ₃ and the effects of nonstoichiometry. <i>APL Materials</i> , 2014 , 2, 012106	5.7	47
226	Monolithically Integrated Circuits from Functional Oxides. <i>Advanced Materials Interfaces</i> , 2014 , 1, 13000316	3.16	45
225	Visualizing short-range charge transfer at the interfaces between ferromagnetic and superconducting oxides. <i>Nature Communications</i> , 2013 , 4, 2336	17.4	61
224	LaAlO ₃ stoichiometry is key to electron liquid formation at LaAlO ₃ /SrTiO ₃ interfaces. <i>Nature Communications</i> , 2013 , 4, 2351	17.4	177
223	Nature of the metal insulator transition in ultrathin epitaxial vanadium dioxide. <i>Nano Letters</i> , 2013 , 13, 4857-61	11.5	77
222	Interface superconductor with gap behaviour like a high-temperature superconductor. <i>Nature</i> , 2013 , 502, 528-31	50.4	174
221	Towards artifact-free atomic-resolution elemental mapping with electron energy-loss spectroscopy. <i>Applied Physics Letters</i> , 2013 , 103, 141908	3.4	13
220	Stacking order dependent second harmonic generation and topological defects in h-BN bilayers. <i>Nano Letters</i> , 2013 , 13, 5660-5	11.5	106
219	Exploiting dimensionality and defect mitigation to create tunable microwave dielectrics. <i>Nature</i> , 2013 , 502, 532-6	50.4	170
218	Hierarchical porous polymer scaffolds from block copolymers. <i>Science</i> , 2013 , 341, 530-4	33.3	214
217	Imaging atomic rearrangements in two-dimensional silica glass: watching silica's dance. <i>Science</i> , 2013 , 342, 224-7	33.3	162
216	One-dimensional electrical contact to a two-dimensional material. <i>Science</i> , 2013 , 342, 614-7	33.3	1676
215	Strain solitons and topological defects in bilayer graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 11256-60	11.5	293
214	Adsorption-controlled growth of BiVO ₄ by molecular-beam epitaxy. <i>APL Materials</i> , 2013 , 1, 042112	5.7	54

213	Structurally ordered intermetallic platinum-cobalt core-shell nanoparticles with enhanced activity and stability as oxygen reduction electrocatalysts. <i>Nature Materials</i> , 2013 , 12, 81-7	27	1467
212	Effect of reduced dimensionality on the optical band gap of SrTiO ₃ . <i>Applied Physics Letters</i> , 2013 , 102, 122901	3.4	45
211	Grains and grain boundaries in highly crystalline monolayer molybdenum disulphide. <i>Nature Materials</i> , 2013 , 12, 554-61	27	1590
210	Infiltrating sulfur in hierarchical architecture MWCNT@meso C core-shell nanocomposites for lithium-sulfur batteries. <i>Physical Chemistry Chemical Physics</i> , 2013 , 15, 9051-7	3.6	63
209	Coalescence in the Thermal Annealing of Nanoparticles: An in Situ STEM Study of the Growth Mechanisms of Ordered PtBe Nanoparticles in a KCl Matrix. <i>Chemistry of Materials</i> , 2013 , 25, 1436-1442	9.6	58
208	Defining Crystalline/Amorphous Phases of Nanoparticles through X-ray Absorption Spectroscopy and X-ray Diffraction: The Case of Nickel Phosphide. <i>Chemistry of Materials</i> , 2013 , 25, 2394-2403	9.6	81
207	Scanning confocal electron energy-loss microscopy using valence-loss signals. <i>Microscopy and Microanalysis</i> , 2013 , 19, 1036-49	0.5	5
206	The Open-Source Cornell Spectrum Imager. <i>Microscopy Today</i> , 2013 , 21, 40-44	0.4	5
205	In situ electron energy-loss spectroscopy in liquids. <i>Microscopy and Microanalysis</i> , 2013 , 19, 1027-35	0.5	112
204	Multicompartment mesoporous silica nanoparticles with branched shapes: an epitaxial growth mechanism. <i>Science</i> , 2013 , 340, 337-41	33.3	132
203	From atoms to grains: Transmission electron microscopy of graphene. <i>MRS Bulletin</i> , 2012 , 37, 1214-1221	3.2	6
202	Tuning oxygen reduction reaction activity via controllable dealloying: a model study of ordered Cu ₃ Pt/C intermetallic nanocatalysts. <i>Nano Letters</i> , 2012 , 12, 5230-8	11.5	259
201	Efficient elastic imaging of single atoms on ultrathin supports in a scanning transmission electron microscope. <i>Ultramicroscopy</i> , 2012 , 123, 59-65	3.1	20
200	A surfactant-free strategy for synthesizing and processing intermetallic platinum-based nanoparticle catalysts. <i>Journal of the American Chemical Society</i> , 2012 , 134, 18453-9	16.4	90
199	Atomic-Scale Compositional Mapping and 3-Dimensional Electron Microscopy of Dealloyed PtCo ₃ Catalyst Nanoparticles with Spongy Multi-Core/Shell Structures. <i>Journal of the Electrochemical Society</i> , 2012 , 159, F554-F559	3.9	24
198	Chemical vapor deposition-derived graphene with electrical performance of exfoliated graphene. <i>Nano Letters</i> , 2012 , 12, 2751-6	11.5	321
197	Determining on-axis crystal thickness with quantitative position-averaged incoherent bright-field signal in an aberration-corrected STEM. <i>Microscopy and Microanalysis</i> , 2012 , 18, 720-7	0.5	13
196	Quantum many-body interactions in digital oxide superlattices. <i>Nature Materials</i> , 2012 , 11, 855-9	27	80

195	Comparison between Dealloyed PtCo ₃ and PtCu ₃ Cathode Catalysts for Proton Exchange Membrane Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 19877-19885	3.8	82
194	Fano resonance in atomic-resolution spectroscopic imaging of solids. <i>Physical Review B</i> , 2012 , 86,	3.3	6
193	Three-dimensional tracking and visualization of hundreds of Pt-Co fuel cell nanocatalysts during electrochemical aging. <i>Nano Letters</i> , 2012 , 12, 4417-23	11.5	145
192	Atomic-resolution spectroscopic imaging of ensembles of nanocatalyst particles across the life of a fuel cell. <i>Nano Letters</i> , 2012 , 12, 490-7	11.5	149
191	Channeling of a subangstrom electron beam in a crystal mapped to two-dimensional molecular orbitals. <i>Physical Review B</i> , 2012 , 86,	3.3	19
190	Facile Synthesis of Carbon-Supported Pd@Co Core@Shell Nanoparticles as Oxygen Reduction Electrocatalysts and Their Enhanced Activity and Stability with Monolayer Pt Decoration. <i>Chemistry of Materials</i> , 2012 , 24, 2274-2281	9.6	154
189	Networked and chiral nanocomposites from ABC triblock terpolymer coassembly with transition metal oxide nanoparticles. <i>Journal of Materials Chemistry</i> , 2012 , 22, 1078-1087		52
188	The adsorption-controlled growth of LuFe ₂ O ₄ by molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2012 , 101, 132907	3.4	32
187	Graphene and boron nitride lateral heterostructures for atomically thin circuitry. <i>Nature</i> , 2012 , 488, 627-324	32.4	650
186	Twinning and twisting of tri- and bilayer graphene. <i>Nano Letters</i> , 2012 , 12, 1609-15	11.5	194
185	Atomic-resolution chemical imaging of oxygen local bonding environments by electron energy loss spectroscopy. <i>Applied Physics Letters</i> , 2012 , 101, 042907	3.4	36
184	Direct imaging of a two-dimensional silica glass on graphene. <i>Nano Letters</i> , 2012 , 12, 1081-6	11.5	206
183	Tailoring electrical transport across grain boundaries in polycrystalline graphene. <i>Science</i> , 2012 , 336, 1143-6	33.3	469
182	Analytical electron microscopy of black carbon and microaggregated mineral matter in Amazonian dark Earth. <i>Journal of Microscopy</i> , 2012 , 245, 129-39	1.9	17
181	Direct determination of the effect of strain on domain morphology in ferroelectric superlattices with scanning probe microscopy. <i>Journal of Applied Physics</i> , 2012 , 112, 052011	2.5	6
180	Data processing for atomic resolution electron energy loss spectroscopy. <i>Microscopy and Microanalysis</i> , 2012 , 18, 667-75	0.5	87
179	Softened elastic response and unzipping in chemical vapor deposition graphene membranes. <i>Nano Letters</i> , 2011 , 11, 2259-63	11.5	278
178	Surfactant ligand removal and rational fabrication of inorganically connected quantum dots. <i>Nano Letters</i> , 2011 , 11, 5356-61	11.5	187

177	Extended depth of field for high-resolution scanning transmission electron microscopy. <i>Microscopy and Microanalysis</i> , 2011 , 17, 75-80	0.5	38
176	Grains and grain boundaries in single-layer graphene atomic patchwork quilts. <i>Nature</i> , 2011 , 469, 389-92	50.4	1573
175	Stackable nonvolatile memory with ultra thin polysilicon film and low-leakage (Ti,Dy) _x O _y for low processing temperature and low operating voltages. <i>Microelectronic Engineering</i> , 2011 , 88, 3462-3465	2.5	
174	DNAsomes: Multifunctional DNA-based nanocarriers. <i>Small</i> , 2011 , 7, 74-8	11	66
173	Calcite Prisms from Mollusk Shells (<i>Atrina Rigida</i>): Swiss-cheese-like Organic/Inorganic Single-crystal Composites. <i>Advanced Functional Materials</i> , 2011 , 21, 2028-2034	15.6	87
172	Epitaxial oxygen getter for a brownmillerite phase transformation in manganite films. <i>Advanced Materials</i> , 2011 , 23, 1226-30	24	51
171	Direct measurement of electron channeling in a crystal using scanning transmission electron microscopy. <i>Physical Review B</i> , 2011 , 84,	3.3	17
170	Nanometer-scale epitaxial strain release in perovskite heterostructures using BrAlOx sliding buffer layers. <i>Applied Physics Letters</i> , 2011 , 98, 171901	3.4	4
169	A strong ferroelectric ferromagnet created by means of spin-lattice coupling. <i>Nature</i> , 2011 , 476, 114	50.4	21
168	A strong ferroelectric ferromagnet created by means of spin-lattice coupling. <i>Nature</i> , 2010 , 466, 954-8	50.4	586
167	Interference effects on guided Cherenkov emission in silicon from perpendicular, oblique, and parallel boundaries. <i>Physical Review B</i> , 2010 , 81,	3.3	2
166	Mapping local optical densities of states in silicon photonic structures with nanoscale electron spectroscopy. <i>Physical Review B</i> , 2010 , 81,	3.3	13
165	Relativistic electron energy loss spectroscopy of solid and core-shell nanowires. <i>Physical Review B</i> , 2010 , 81,	3.3	8
164	Microscopic origins for stabilizing room-temperature ferromagnetism in ultrathin manganite layers. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 11682-5	11.5	120
163	Pt-decorated PdCo@Pd/C core-shell nanoparticles with enhanced stability and electrocatalytic activity for the oxygen reduction reaction. <i>Journal of the American Chemical Society</i> , 2010 , 132, 17664-6	16.4	286
162	Tunnel magnetoresistance and spin torque switching in MgO-based magnetic tunnel junctions with a Co/Ni multilayer electrode. <i>Applied Physics Letters</i> , 2010 , 97, 072513	3.4	33
161	Atomic-resolution spectroscopic imaging of oxide interfaces. <i>Philosophical Magazine</i> , 2010 , 90, 4731-4749	49.6	51
160	Three-dimensional imaging in aberration-corrected electron microscopes. <i>Microscopy and Microanalysis</i> , 2010 , 16, 445-55	0.5	29

159	Block copolymer self-assembly-directed single-crystal homo- and heteroepitaxial nanostructures. <i>Science</i> , 2010 , 330, 214-9	33.3	92
158	Three-dimensional imaging of pore structures inside low- ϵ dielectrics. <i>Applied Physics Letters</i> , 2010 , 96, 223108	3.4	18
157	Magnetism at spinel thin film interfaces probed through soft X-ray spectroscopy techniques. <i>Journal of Magnetism and Magnetic Materials</i> , 2010 , 322, 2915-2921	2.8	9
156	Mn ₃ O ₄ precipitates in laser-ablated manganite films. <i>Applied Physics Letters</i> , 2009 , 95, 043112	3.4	17
155	Electron scattering at dislocations in LaAlO ₃ /SrTiO ₃ interfaces. <i>Physical Review Letters</i> , 2009 , 102, 046809	9.4	41
154	High magnetoresistance tunnel junctions with MgB ₂ barriers and NiBeB free electrodes. <i>Applied Physics Letters</i> , 2009 , 94, 112504	3.4	18
153	Atomic-scale spectroscopic imaging of CoFeB/MgB ₂ /CoFeB magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2009 , 95, 032506	3.4	41
152	Aberration-corrected ADF-STEM depth sectioning and prospects for reliable 3D imaging in S/TEM. <i>Journal of Electron Microscopy</i> , 2009 , 58, 157-65		67
151	Resonant soft x-ray scattering studies of interface reconstructions in SrTiO ₃ /LaAlO ₃ superlattices. <i>Journal of Applied Physics</i> , 2009 , 106, 083705	2.5	21
150	Structure and bonding at the atomic scale by scanning transmission electron microscopy. <i>Nature Materials</i> , 2009 , 8, 263-70	27	316
149	Free-standing nanoparticle superlattice sheets controlled by DNA. <i>Nature Materials</i> , 2009 , 8, 519-25	27	344
148	Multifunctional nanoarchitectures from DNA-based ABC monomers. <i>Nature Nanotechnology</i> , 2009 , 4, 430-6	28.7	144
147	A high-speed area detector for novel imaging techniques in a scanning transmission electron microscope. <i>Ultramicroscopy</i> , 2009 , 109, 304-11	3.1	21
146	Epitaxial Ba _{0.5} Sr _{0.5} TiO ₃ /GaN heterostructures with abrupt interfaces. <i>Journal of Crystal Growth</i> , 2009 , 311, 1106-1109	1.6	15
145	Three-dimensional measurement of line edge roughness in copper wires using electron tomography. <i>Microscopy and Microanalysis</i> , 2009 , 15, 244-50	0.5	15
144	Incoherent Bright Field STEM for Imaging and Tomography of Ultra-Thick TEM Cross-sections. <i>Microscopy and Microanalysis</i> , 2009 , 15, 238-239	0.5	7
143	Electron Tomography in Materials Science. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1534-1535	0.5	1
142	Visualizing the 3D internal structure of calcite single crystals grown in agarose hydrogels. <i>Science</i> , 2009 , 326, 1244-7	33.3	232

141	Effect of biaxial strain on the electrical and magnetic properties of (001) La _{0.7} Sr _{0.3} MnO ₃ thin films. <i>Applied Physics Letters</i> , 2009 , 95, 112504	3.4	164
140	Optical band gap and magnetic properties of unstrained EuTiO ₃ films. <i>Applied Physics Letters</i> , 2009 , 94, 212509	3.4	56
139	A ferroelectric oxide made directly on silicon. <i>Science</i> , 2009 , 324, 367-70	33.3	320
138	Growth of homoepitaxial SrTiO ₃ thin films by molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2009 , 94, 162905	3.4	179
137	Using electrons as a high-resolution probe of optical modes in individual nanowires. <i>Nano Letters</i> , 2009 , 9, 4073-7	11.5	19
136	Aberration-Corrected STEM Imaging and 2-D Elemental-Resolved Valence-EELS Mapping of Ru-TaN Ultrathin Barrier Layer. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1198-1199	0.5	
135	Prospects for Reliable 3D Imaging in Aberration-corrected STEM, TEM and SCEM. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1474-1475	0.5	5
134	Nanoscale Imaging of Photonic Densities of States in Finite Photonic Structures. <i>Microscopy and Microanalysis</i> , 2009 , 15, 452-453	0.5	
133	Atomic-Scale Chemical Imaging of Interdiffusion and Defects in (La _{0.7} Sr _{0.3} MnO ₃) ₅ /(SrTiO ₃) ₅ Multilayers by Aberration Corrected Microscopy. <i>Microscopy and Microanalysis</i> , 2009 , 15, 428-429	0.5	
132	Electron Channeling Artifacts in Silicon [211] Using Aberration-Corrected STEM. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1492-1493	0.5	1
131	Three-Dimensional Imaging of Corrosion Mechanisms in Polymer Electrolyte Fuel Cells by Scanning Transmission Electron Tomography. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1418-1419	0.5	2
130	Measurements of Porous Networks in Low-k Dielectric by Three-dimensional Electron Tomography. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1240-1241	0.5	1
129	High-temperature interface superconductivity between metallic and insulating copper oxides. <i>Nature</i> , 2008 , 455, 782-5	50.4	390
128	Imaging the phase separation in atomically thin buried SrTiO ₃ layers by electron channeling. <i>Physical Review Letters</i> , 2008 , 100, 036101	7.4	31
127	Tunneling Magnetoresistance and B Diffusion in CoFeB/MgO/CoFeB Magnetic Tunnel Junctions Characterized by STEM-EELS. <i>Microscopy and Microanalysis</i> , 2008 , 14, 394-395	0.5	
126	Atomic-scale chemical imaging of composition and bonding by aberration-corrected microscopy. <i>Science</i> , 2008 , 319, 1073-6	33.3	513
125	Characterization of Carbon Corrosion-Induced Structural Damage of PEM Fuel Cell Cathode Electrodes Caused by Local Fuel Starvation. <i>Journal of the Electrochemical Society</i> , 2008 , 155, B979	3.9	99
124	Material and electrical characterization of stackable planar polysilicon TFT flash memory cell with metal nanocrystals and high-k dielectrics 2008 ,		1

123	Self-Assembly of Four-Layer Woodpile Structure from Zigzag ABC Copolymer/Aluminosilicate Concertinas. <i>Macromolecules</i> , 2008 , 41, 852-859	5.5	27
122	Improved epitaxy of barium titanate by molecular beam epitaxy through a single crystalline magnesium oxide template for integration on hexagonal silicon carbide. <i>Journal of Vacuum Science & Technology B</i> , 2008 , 26, 1110		6
121	ALD growth of a mixed-phase novel barrier for seedless copper electroplating applications 2008 ,		6
120	Negative differential resistance induced by Mn substitution at SrRuO ₃ /Nb:SrTiO ₃ Schottky interfaces. <i>Physical Review B</i> , 2008 , 77,	3.3	13
119	Measuring far-ultraviolet whispering gallery modes with high energy electrons. <i>Applied Physics Letters</i> , 2008 , 93, 243106	3.4	13
118	Publisher's Note: Imaging the Phase Separation in Atomically Thin Buried SrTiO ₃ Layers by Electron Channeling [Phys. Rev. Lett. 100, 036101 (2008)]. <i>Physical Review Letters</i> , 2008 , 100,	7.4	3
117	Formation of guided Cherenkov radiation in silicon-based nanocomposites. <i>Physical Review Letters</i> , 2008 , 100, 217402	7.4	37
116	Depth sectioning of individual dopant atoms with aberration-corrected scanning transmission electron microscopy. <i>Applied Physics Letters</i> , 2008 , 92, 013125	3.4	47
115	Competition between bulk and interface plasmonic modes in valence electron energy-loss spectroscopy of ultrathin SiO ₂ gate stacks. <i>Physical Review B</i> , 2008 , 77,	3.3	30
114	A Pixel Array Detector for Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2008 , 14, 806-807	0.5	0
113	Controlling Channeling Effects in Aberration-Corrected STEM Tomography. <i>Microscopy and Microanalysis</i> , 2008 , 14, 926-927	0.5	5
112	Effects of specimen tilt in ADF-STEM imaging of a-Si/c-Si interfaces. <i>Ultramicroscopy</i> , 2008 , 108, 494-501	3.1	32
111	Analytic derivation of optimal imaging conditions for incoherent imaging in aberration-corrected electron microscopes. <i>Ultramicroscopy</i> , 2008 , 108, 1454-66	3.1	53
110	Beam spreading and spatial resolution in thick organic specimens. <i>Ultramicroscopy</i> , 2008 , 109, 1-7	3.1	47
109	The Theory and Interpretation of Electron Energy Loss Near-Edge Fine Structure. <i>Annual Review of Materials Research</i> , 2008 , 38, 535-558	12.8	40
108	Effects of Interfacial Organic Layers on Nucleation, Growth, and Morphological Evolution in Atomic Layer Thin Film Deposition. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 11045-11058	3.8	34
107	Three-Dimensional Imaging of Carbon Nanotubes Deformed by Metal Islands. <i>Nano Letters</i> , 2007 , 7, 3770-3773	0.3	29
106	Epitaxial integration of the highly spin-polarized ferromagnetic semiconductor EuO with silicon and GaN. <i>Nature Materials</i> , 2007 , 6, 882-7	27	222

105	Superconducting interfaces between insulating oxides. <i>Science</i> , 2007 , 317, 1196-9	33-3	2013
104	Spatially resolved electron energy-loss spectroscopy of electron-beam grown and sputtered CoFeB/MgO/CoFeB magnetic tunnel junctions. <i>Applied Physics Letters</i> , 2007 , 91, 062516	3-4	55
103	Asymmetric interface profiles in LaVO ₃ /TiO ₃ heterostructures grown by pulsed laser deposition. <i>Applied Physics Letters</i> , 2007 , 91, 163101	3-4	33
102	Valence changes and structural distortions in "charge ordered" manganites quantified by atomic-scale scanning transmission electron microscopy. <i>Physical Review Letters</i> , 2007 , 99, 237205	7-4	17
101	Growth and epitaxial structure of LaVO _x films. <i>Applied Physics Letters</i> , 2006 , 89, 031918	3-4	35
100	Nanometer scale electronic reconstruction at the interface between LaVO ₃ and LaVO ₄ . <i>Physical Review Letters</i> , 2006 , 97, 256803	7-4	42
99	Lattice-polarization effects on electron-gas charge densities in ionic superlattices. <i>Physical Review B</i> , 2006 , 73,	3-3	73
98	Three-dimensional imaging of nonspherical silicon nanoparticles embedded in silicon oxide by plasmon tomography. <i>Applied Physics Letters</i> , 2006 , 89, 151920	3-4	91
97	Surface Roughness Instabilities in Low-Angle Ion Milling. <i>Microscopy and Microanalysis</i> , 2006 , 12, 1318-1319		2
96	Atomic and Electronic Imaging of Oxide Heterostructures. <i>Microscopy and Microanalysis</i> , 2006 , 12, 516-517		5
95	3-D Imaging of Non-Spherical Silicon Nanoparticles Embedded in Silicon Oxide by Plasmon Tomography. <i>Microscopy and Microanalysis</i> , 2006 , 12, 532-533	0-5	1
94	Why some interfaces cannot be sharp. <i>Nature Materials</i> , 2006 , 5, 204-209	27	1219
93	Room design for high-performance electron microscopy. <i>Ultramicroscopy</i> , 2006 , 106, 1033-40	3-1	56
92	Subtleties in ADF imaging and spatially resolved EELS: A case study of low-angle twist boundaries in SrTiO ₃ . <i>Ultramicroscopy</i> , 2006 , 106, 1053-61	3-1	62
91	Three-dimensional Imaging of Nano-Voids in Copper Interconnects using Incoherent Bright Field (IBF) Tomography. <i>Microscopy and Microanalysis</i> , 2006 , 12, 1554-1555	0-5	
90	Three-dimensional imaging of nanovoids in copper interconnects using incoherent bright field tomography. <i>Applied Physics Letters</i> , 2006 , 88, 243116	3-4	78
89	A sound barrier for silicon?. <i>Nature Materials</i> , 2005 , 4, 645-7	27	33
88	HfO ₂ and Al ₂ O ₃ gate dielectrics on GaAs grown by atomic layer deposition. <i>Applied Physics Letters</i> , 2005 , 86, 152904	3-4	280

87	Study of strain fields at a-Si/c-Si interface. <i>Journal of Applied Physics</i> , 2004 , 95, 3362-3371	2.5	121
86	Atomic-scale imaging of nanoengineered oxygen vacancy profiles in SrTiO ₃ . <i>Nature</i> , 2004 , 430, 657-61	50.4	520
85	High-mobility electrons in SrTiO ₃ heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2004 , 22, 712-716	3	21
84	The formation of clusters and nanocrystals in er-implanted hexagonal silicon carbide. <i>Microscopy and Microanalysis</i> , 2004 , 10, 301-10	0.5	5
83	Star-shaped azo-based dipolar chromophores: design, synthesis, matrix compatibility, and electro-optic activity. <i>Journal of the American Chemical Society</i> , 2004 , 126, 1741-7	16.4	94
82	Depth-dependent imaging of individual dopant atoms in silicon. <i>Microscopy and Microanalysis</i> , 2004 , 10, 291-300	0.5	67
81	ADF-STEM Imaging of Dopants and Defect Nanoclusters in Si. <i>Microscopy and Microanalysis</i> , 2003 , 9, 22-23.5		
80	Imaging individual atoms inside crystals with ADF-STEM. <i>Ultramicroscopy</i> , 2003 , 96, 251-73	3.1	195
79	Dopant mapping for the nanotechnology age. <i>Nature Materials</i> , 2003 , 2, 129-31	27	55
78	Advances in high ϵ gate dielectrics for Si and III-V semiconductors. <i>Journal of Crystal Growth</i> , 2003 , 251, 645-650	1.6	65
77	Thin dielectric film thickness determination by advanced transmission electron microscopy. <i>Microscopy and Microanalysis</i> , 2003 , 9, 493-508	0.5	53
76	Direct fabrication of large micropatterned single crystals. <i>Science</i> , 2003 , 299, 1205-8	33.3	470
75	Evidence for a new class of defects in highly n-doped Si: donor-pair-vacancy-interstitial complexes. <i>Physical Review Letters</i> , 2003 , 91, 125505	7.4	28
74	Morphology and crystallization kinetics in HfO ₂ thin films grown by atomic layer deposition. <i>Journal of Applied Physics</i> , 2003 , 93, 1477-1481	2.5	137
73	Correlation of annealing effects on local electronic structure and macroscopic electrical properties for HfO ₂ deposited by atomic layer deposition. <i>Applied Physics Letters</i> , 2003 , 83, 3984-3986	3.4	98
72	Artificial Charge Modulations in La-doped SrTiO ₃ Superlattices. <i>Microscopy and Microanalysis</i> , 2002 , 8, 576-577	0.5	
71	Fluctuation microscopy in the STEM. <i>Ultramicroscopy</i> , 2002 , 93, 147-59	3.1	108
70	Artificial charge-modulation in atomic-scale perovskite titanate superlattices. <i>Nature</i> , 2002 , 419, 378-80	50.4	851

69	Atomic-scale imaging of individual dopant atoms and clusters in highly n-type bulk Si. <i>Nature</i> , 2002 , 416, 826-9	50.4	367
68	Direct observation of defect-mediated cluster nucleation. <i>Nature Materials</i> , 2002 , 1, 102-5	27	91
67	Nucleation and growth of atomic layer deposited HfO ₂ gate dielectric layers on chemical oxide (Si ₃ N ₄) and thermal oxide (SiO ₂ or SiO ₂ /Si ₃ N ₄) underlayers. <i>Journal of Applied Physics</i> , 2002 , 92, 7168-7174	2.5	249
66	Absolute and approximate calculations of electron-energy-loss spectroscopy edge thresholds. <i>Physical Review Letters</i> , 2002 , 89, 126404	7.4	22
65	Epitaxial growth and electronic structure of LaTiO _x films. <i>Applied Physics Letters</i> , 2002 , 80, 3922-3924	3.4	107
64	Structural studies of ultrathin zirconia dielectrics. <i>Philosophical Magazine Letters</i> , 2002 , 82, 519-528	1	15
63	Materials Characterization of Alternative Gate Dielectrics. <i>MRS Bulletin</i> , 2002 , 27, 206-211	3.2	68
62	Simulation of thermal diffuse scattering including a detailed phonon dispersion curve. <i>Ultramicroscopy</i> , 2001 , 86, 371-80	3.1	103
61	Mask-membrane impact on image blur in SCALPEL. <i>Microelectronic Engineering</i> , 2001 , 57-58, 277-284	2.5	2
60	Optimizing the environment for sub-0.2 nm scanning transmission electron microscopy. <i>Microscopy (Oxford, England)</i> , 2001 , 50, 219-26	1.3	28
59	Atomic scale measurements of the interfacial electronic structure and chemistry of zirconium silicate gate dielectrics. <i>Applied Physics Letters</i> , 2001 , 79, 4195-4197	3.4	64
58	Growth and characterization of ultrathin zirconia dielectrics grown by ultraviolet ozone oxidation. <i>Applied Physics Letters</i> , 2001 , 79, 2621-2623	3.4	53
57	Doping by metal-mediated epitaxy: Growth of As delta-doped Si through a Pb monolayer. <i>Applied Physics Letters</i> , 2001 , 78, 1505-1507	3.4	8
56	Properties of high ϵ_r gate dielectrics Gd ₂ O ₃ and Y ₂ O ₃ for Si. <i>Journal of Applied Physics</i> , 2001 , 89, 3920-3927	5	237
55	Effect of oxygen stoichiometry on the electrical properties of zirconia gate dielectrics. <i>Applied Physics Letters</i> , 2001 , 79, 3311-3313	3.4	59
54	Gate dielectric metrology using advanced TEM measurements. <i>AIP Conference Proceedings</i> , 2001 ,	0	8
53	Current Limits in Predicting EELS Fine Structure. <i>Microscopy and Microanalysis</i> , 2001 , 7, 1172-1173	0.5	
52	EELS as a Probe of Local Electronic Structure and Cohesion. <i>Microscopy and Microanalysis</i> , 2001 , 7, 194-195	0.5	

51	Evolution of the Interfacial Electronic Structure During Thermal Oxidation. <i>Springer Series in Materials Science</i> , 2001 , 219-246	0.9	3
50	A Closer Look at Modern Gate Oxides. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 611, 1		13
49	The relentless march of the MOSFET gate oxide thickness to zero. <i>Microelectronics Reliability</i> , 2000 , 40, 557-562	1.2	22
48	Electronic properties of the Si/SiO ₂ interface from first principles. <i>Physical Review Letters</i> , 2000 , 85, 1298-301	7.4	104
47	First principles simulation of a ceramic /Metal interface with misfit. <i>Physical Review Letters</i> , 2000 , 84, 3362-5	7.4	84
46	Geometric Frustration of 2D Dopants in Silicon: Surpassing Electrical Saturation. <i>Physical Review Letters</i> , 1999 , 83, 3234-3237	7.4	22
45	Atomic-scale structure and chemistry of ceramic/metal interfacesII. Solute segregation at MgO/Cu (Ag) and CdO/Ag (Au) interfaces. <i>Acta Materialia</i> , 1999 , 47, 3953-3963	8.4	35
44	Characterization and production metrology of thin transistor gate oxide films. <i>Materials Science in Semiconductor Processing</i> , 1999 , 2, 103-147	4.3	51
43	Electron microscopy: probing the atomic structure and chemistry of grain boundaries, interfaces and defects. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 260, 12-28	5.3	38
42	Why changes in bond lengths and cohesion lead to core-level shifts in metals, and consequences for the spatial difference method. <i>Ultramicroscopy</i> , 1999 , 78, 163-174	3.1	49
41	SCALPEL mask-membrane charging. <i>Microelectronic Engineering</i> , 1999 , 46, 223-226	2.5	5
40	Understanding the limits of ultrathin SiO ₂ and SiO ₂ /N gate dielectrics for sub-50 nm CMOS. <i>Microelectronic Engineering</i> , 1999 , 48, 25-30	2.5	47
39	The electronic structure at the atomic scale of ultrathin gate oxides. <i>Nature</i> , 1999 , 399, 758-761	50.4	815
38	Gate Technology Issues for Silicon Mos Nanotransistors. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 584, 283		1
37	Atomic-Scale Imaging of Dopant Atom Distributions within Silicon Doped Layers. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 589, 173		1
36	Electron scattering and transmission through SCALPEL masks. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1998 , 16, 3385		18
35	Simple model for relating EELS and XAS spectra of metals to changes in cohesive energy. <i>Physical Review B</i> , 1998 , 58, 5989-5995	3.3	21
34	Connections between the electron-energy-loss spectra, the local electronic structure, and the physical properties of a material: A study of nickel aluminum alloys. <i>Physical Review B</i> , 1998 , 57, 8181-8202	2.3	176

33	Measurement and models of electron-energy-loss spectroscopy core-level shifts in nickel aluminum intermetallics. <i>Physical Review B</i> , 1998 , 58, 11970-11981	3.3	15
32	Atomic Scale Observations of Metal-Induced Gap States at {222} MgO/Cu Interfaces. <i>Physical Review Letters</i> , 1998 , 80, 4741-4744	7.4	108
31	Observations on the influence of solute on grain boundary diffusion and electromigration 1998 ,		2
30	Atomic Structure of a Polar Ceramic/Metal Interface: {222}MgO/Cu. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 492, 103		
29	Chemistry and Bonding at {222}MgO/Cu Heterophase Interfaces. <i>Microscopy and Microanalysis</i> , 1997 , 3, 647-648	0.5	1
28	Chemistry, bonding and fracture of grain boundaries in Ni ₃ Si. <i>Acta Materialia</i> , 1997 , 45, 3565-3571	8.4	6
27	The role of chemistry in controlling the bonding and fracture properties of grain boundaries in L12 intermetallic compounds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997 , 239-240, 297-308	5.3	9
26	Chemistry, Bonding and Fracture of Grain Boundaries in Ni ₃ Si. <i>Materials Research Society Symposia Proceedings</i> , 1996 , 460, 647		
25	Structure, chemistry and bonding at grain boundaries in Ni ₃ Al. The role of boron in ductilizing grain boundaries. <i>Acta Materialia</i> , 1996 , 44, 1637-1645	8.4	61
24	Structure, chemistry and bonding at grain boundaries in Ni ₃ Al. The structure of small angle boundaries, Ni-enrichment and its influence on bonding, structure, energy and properties. <i>Acta Materialia</i> , 1996 , 44, 1647-1655	8.4	16
23	Beyond fingerprinting: simple but quantitative models of EELS fine structure and the cohesion of interfaces. <i>Proceedings Annual Meeting Electron Microscopy Society of America</i> , 1996 , 54, 520-521		
22	Chemistry, Bonding and Mechanical Properties of Grain Boundaries in Intermetallic Compounds. <i>Proceedings Annual Meeting Electron Microscopy Society of America</i> , 1996 , 54, 340-341		
21	Delocalization in inelastic scattering. <i>Ultramicroscopy</i> , 1995 , 59, 195-213	3.1	234
20	Near atomic scale studies of electronic structure at grain boundaries in Ni ₃ Al. <i>Physical Review Letters</i> , 1995 , 75, 4744-4747	7.4	66
19	Radiation damage of Ni ₃ Al by 100 keV electrons. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1995 , 71, 1375-1387		46
18	Electronic Structure and Bonding at Interfaces Between CVD Diamond and Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 332, 163		1
17	Local Electronic Structure and Cohesion of Grain Boundaries in Ni ₃ Al. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 364, 743		1
16	Ni-Enrichment and its Influence on the Structure Chemistry and Bonding of Grain Boundaries in Ni ₃ Al. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 364, 333		

- 15 Mapping sp² and sp³ states of carbon at sub-nanometre spatial resolution. *Nature*, **1993**, 366, 725-727 50.4 215
- 14 Electron-diffraction studies of amorphous carbon thin films. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1993**, 51, 1100-1101
- 13 Electron beam damage of Ni₃Al. *Proceedings Annual Meeting Electron Microscopy Society of America*, **1993**, 51, 626-627 2
- 12 Structural Models of Negatively Curved Graphitic Carbon. *Materials Research Society Symposia Proceedings*, **1992**, 270, 229 1
- 11 Negatively curved graphitic sheet model of amorphous carbon. *Physical Review Letters*, **1992**, 69, 921-924.4 176
- 10 The structure of the C₇₀ molecule. *Nature*, **1992**, 355, 622-624 50.4 210
- 9 Synthesis, structure and applications of amorphous diamond. *Thin Solid Films*, **1991**, 206, 198-203 2.2 62
- 8 Compressive-stress-induced formation of thin-film tetrahedral amorphous carbon. *Physical Review Letters*, **1991**, 67, 773-776 7.4 845
- 7 Properties of tetrahedral amorphous carbon prepared by vacuum arc deposition. *Diamond and Related Materials*, **1991**, 1, 51-59 3.5 228
- 6 Electron optical characterization of cubic boron nitride thin films prepared by reactive ion plating. *Journal of Applied Physics*, **1991**, 70, 3007-3012 2.5 79
- 5 Electron diffraction of amorphous thin films using PEELS. *Microscopy Microanalysis Microstructures*, **1991**, 2, 359-366 35
- 4 Analytical Electron Microscopy during In Situ Liquid Cell Studies 408-433 1
- 3 Nanosession: Advanced Spectroscopy and Scattering 123-132
- 2 Atomic-Resolution Electron Spectroscopy of Interfaces and Defects in Complex Oxides 32-32
- 1 Emergence of a noncollinear magnetic state in twisted bilayer CrI₃ 4