Gianluigi A Botton

List of Publications by Citations

356 papers	20,923 citations	56 h-index	139 g-index
370 ext. papers	23,981 ext. citations	6.3 avg, IF	6.73 L-index

#	Paper	IF	Citations
356	Electron-energy-loss spectra and the structural stability of nickel oxide: An LSDA+U study. *Physical Review B*, **1998**, 57, 1505-1509	3.3	8200
355	Platinum single-atom and cluster catalysis of the hydrogen evolution reaction. *Nature Communications*, **2016**, 7, 13638	17.4	1085
354	Size-selected synthesis of PtRu nano-catalysts: reaction and size control mechanism. *Journal of the American Chemical Society*, **2004**, 126, 8028-37	16.4	611
353	Single-atom Catalysis Using Pt/Graphene Achieved through Atomic Layer Deposition. *Scientific Reports*, **2013**, 3,	4.9	589
352	Polymerization from the surface of single-walled carbon nanotubes - preparation and characterization of nanocomposites. *Journal of the American Chemical Society*, **2003**, 125, 16015-24	16.4	412
351	Nanocrystalline intermetallics on mesoporous carbon for direct formic acid fuel cell anodes. *Nature Chemistry*, **2010**, 2, 286-93	17.6	405
350	p-Type modulation doped InGaN/GaN dot-in-a-wire white-light-emitting diodes monolithically grown on Si(111). *Nano Letters*, **2011**, 11, 1919-24	11.5	218
349	Multipolar plasmonic resonances in silver nanowire antennas imaged with a subnanometer electron probe. *Nano Letters*, **2011**, 11, 1499-504	11.5	206
348	Comparison of Single Crystal and Polycrystalline LiNi0.5Mn0.3Co0.2O2Positive Electrode Materials for High Voltage Li-Ion Cells. *Journal of the Electrochemical Society*, **2017**, 164, A1534-A1544	3.9	187
347	Atomic layer deposited Pt-Ru dual-metal dimers and identifying their active sites for hydrogen evolution reaction. *Nature Communications*, **2019**, 10, 4936	17.4	186
346	Electronic Structure and Elastic Properties of Strongly Correlated Metal Oxides from First Principles: LSDA + U, SIC-LSDA and EELS Study of UO2 and NiO. *Physica Status Solidi A*, **1998**, 166, 429-443		179
345	Controlling electron overflow in phosphor-free InGaN/GaN nanowire white light-emitting diodes. *Nano Letters*, **2012**, 12, 1317-23	11.5	157
344	The role of vacancies and defects in Na0.44MnO2 nanowire catalysts for lithium–oxygen batteries. *Energy and Environmental Science*, **2012**, 5, 9558	35.4	152
343	A model for the ultrastructure of bone based on electron microscopy of ion-milled sections. *PLoS ONE*, **2012**, 7, e29258	3.7	133
342	Materials science applications of HREELS in near edge structure analysis and low-energy loss spectroscopy. *Ultramicroscopy*, **2003**, 96, 535-46	3.1	133
341	Controlled orientation of liquid-crystalline polythiophene semiconductors for high-performance organic thin-film transistors. *Applied Physics Letters*, **2005**, 86, 142102	3.4	120
340	The Impact of Electrolyte Additives and Upper Cut-off Voltage on the Formation of a Rocksalt Surface Layer in LiNi0.8Mn0.1Co0.1O2Electrodes. *Journal of the Electrochemical Society*, **2017**, 164, A655-A665	3.9	116

339	Plasmonic response of bent silver nanowires for nanophotonic subwavelength waveguiding. *Physical Review Letters*, **2013**, 110, 066801	7.4	115
338	Mixed-quantum-dot solar cells. *Nature Communications*, **2017**, 8, 1325	17.4	113
337	Soluble, Discrete Supramolecular Complexes of Single-Walled Carbon Nanotubes with Fluorene-Based Conjugated Polymers. *Macromolecules*, **2008**, 41, 2304-2308	5.5	111
336	Full-Color Single Nanowire Pixels for Projection Displays. *Nano Letters*, **2016**, 16, 4608-15	11.5	106
335	Chemical Structure of Nitrogen-Doped Graphene with Single Platinum Atoms and Atomic Clusters as a Platform for the PEMFC Electrode. *Journal of Physical Chemistry C*, **2014**, 118, 3890-3900	3.8	105
334	Encapsulation of conjugated oligomers in single-walled carbon nanotubes: towards nanohybrids for photonic devices. *Advanced Materials*, **2010**, 22, 1635-9	24	102
333	Electronic structure of possible 3d 'heavy-fermion' compound. *Journal of Physics Condensed Matter*, **1998**, 10, L119-L126	1.8	102
332	Elucidating the Nature of the Active Phase in Copper/Ceria Catalysts for CO Oxidation. *ACS Catalysis*, **2016**, 6, 1675-1679	13.1	97
331	Chemical and biological integration of a mouldable bioactive ceramic material capable of forming apatite in vivo in teeth. *Biomaterials*, **2004**, 25, 2781-7	15.6	94
330	Nanoscale Manipulation of Spinel Lithium Nickel Manganese Oxide Surface by Multisite Ti Occupation as High-Performance Cathode. *Advanced Materials*, **2017**, 29, 1703764	24	91
329	Bonding and structure of a reconstructed (001) surface of SrTiO3 from TEM. *Nature*, **2012**, 490, 384-7	50.4	91
328	PtAuCo Alloy Electrocatalysts Demonstrating Enhanced Activity and Durability toward the Oxygen Reduction Reaction. *ACS Catalysis*, **2015**, 5, 1513-1524	13.1	90
327	Enhanced and tunable surface plasmons in two-dimensional Ti3C2 stacks: Electronic structure versus boundary effects. *Physical Review B*, **2014**, 89,	3.3	90
326	High efficiency solar-to-hydrogen conversion on a monolithically integrated InGaN/GaN/Si adaptive tunnel junction photocathode. *Nano Letters*, **2015**, 15, 2721-6	11.5	86
325	Mapping bright and dark modes in gold nanoparticle chains using electron energy loss spectroscopy. *Nano Letters*, **2014**, 14, 3799-808	11.5	86
324	Strained lattice with persistent atomic order in Pt3Fe2 intermetallic core-shell nanocatalysts. *ACS Nano*, **2013**, 7, 6103-10	16.7	86
323	Copper adparticle enabled selective electrosynthesis of n-propanol. *Nature Communications*, **2018**, 9, 4614	17.4	86
322	Elemental mapping at the atomic scale using low accelerating voltages. *Ultramicroscopy*, **2010**, 110, 926-934	3.1	83

321	Experimental and theoretical study of the electronic structure of Fe, Co, and Ni aluminides with the B2 structure. *Physical Review B*, **1996**, 54, 1682-1691	3.3	83
320	Can magneto-plasmonic nanohybrids efficiently combine photothermia with magnetic hyperthermia?. *Nanoscale*, **2015**, 7, 18872-7	7.7	82
319	Microscopic Studies on Liquid Crystal Poly(3,3‴dialkylquaterthiophene) Semiconductor. *Macromolecules*, **2004**, 37, 8307-8312	5.5	82
318	High-resolution EELS study of the vacancy-doped metal/insulator system, Nd1−xTiO3, to 0.33.. *Journal of Solid State Chemistry*, **2005**, 178, 1008-1016	3.3	81
317	In Situ Liquid Cell TEM Study of Morphological Evolution and Degradation of Pt-Fe Nanocatalysts During Potential Cycling. *Journal of Physical Chemistry C*, **2014**, 118, 22111-22119	3.8	80
316	Tunable Syngas Production from CO and H O in an Aqueous Photoelectrochemical Cell. *Angewandte Chemie - International Edition*, **2016**, 55, 14262-14266	16.4	78
315	Synthesis of Metal Alloy Nanoparticles in Solution by Laser Irradiation of a Metal Powder Suspension. *Journal of Physical Chemistry B*, **2003**, 107, 6920-6923	3.4	75
314	Engineering the carrier dynamics of InGaN nanowire white light-emitting diodes by distributed p-AlGaN electron blocking layers. *Scientific Reports*, **2015**, 5, 7744	4.9	74
313	Controlled Coalescence of AlGaN Nanowire Arrays: An Architecture for Nearly Dislocation-Free Planar Ultraviolet Photonic Device Applications. *Advanced Materials*, **2016**, 28, 8446-8454	24	70
312	Quantification of the EELS near-edge structures to study Mn doping in oxides. *Journal of Microscopy*, **1995**, 180, 211-216	1.9	68
311	Synthesis of Single Crystal LiNi0.88Co0.09Al0.03O2´with a Two-Step Lithiation Method. *Journal of the Electrochemical Society*, **2019**, 166, A1956-A1963	3.9	67
310	Intracellular Biodegradation of Ag Nanoparticles, Storage in Ferritin, and Protection by a Au Shell for Enhanced Photothermal Therapy. *ACS Nano*, **2018**, 12, 6523-6535	16.7	67
309	Three-Dimensional Quantum Confinement of Charge Carriers in Self-Organized AlGaN Nanowires: A Viable Route to Electrically Injected Deep Ultraviolet Lasers. *Nano Letters*, **2015**, 15, 7801-7	11.5	67
308	Silver Nanorice Structures: Oriented Attachment-Dominated Growth, High Environmental Sensitivity, and Real-Space Visualization of Multipolar Resonances. *Chemistry of Materials*, **2012**, 24, 2339-2346	9.6	64
307	Dark-field transmission electron microscopy of cortical bone reveals details of extrafibrillar crystals. *Journal of Structural Biology*, **2014**, 188, 240-8	3.4	63
306	Equilibrium and stability of phase-separating Au-Pt nanoparticles. *Acta Materialia*, **2008**, 56, 5972-5983	8.4	62
305	Pt/Pd Single-Atom Alloys as Highly Active Electrochemical Catalysts and the Origin of Enhanced Activity. *ACS Catalysis*, **2019**, 9, 9350-9358	13.1	61
304	AlN/h-BN Heterostructures for Mg Dopant-Free Deep Ultraviolet Photonics. *Nano Letters*, **2017**, 17, 3738-3743	11.5	59

303	The role of aluminum distribution on the local corrosion resistance of the microstructure in a sand-cast AM50 alloy. *Corrosion Science*, **2013**, 77, 151-163	6.8	58
302	Quantitative evaluation of radiation damage to polyethylene terephthalate by soft X-rays and high-energy electrons. *Journal of Physical Chemistry B*, **2009**, 113, 1869-76	3.4	57
301	High-resolution observations of an amorphous layer and subsurface damage formed by femtosecond laser irradiation of silicon. *Journal of Applied Physics*, **2008**, 103, 053104	2.5	57
300	High Efficiency Si Photocathode Protected by Multifunctional GaN Nanostructures. *Nano Letters*, **2018**, 18, 6530-6537	11.5	56
299	Intergranular fracture in irradiated Inconel X-750 containing very high concentrations of helium and hydrogen. *Journal of Nuclear Materials*, **2015**, 457, 165-172	3.3	55
298	GaP/GaAsP/GaP core□multishell nanowire heterostructures on (111) silicon. *Nanotechnology*, **2007**, 18, 445304	3.4	55
297	Structure and chemistry of the Si(111)/AlN interface. *Applied Physics Letters*, **2012**, 100, 011910	3.4	54
296	Cross-sectional study of periodic surface structures on gallium phosphide induced by ultrashort laser pulse irradiation. *Applied Physics Letters*, **2008**, 92, 221112	3.4	53
295	Molecular beam epitaxy growth of Al-rich AlGaN nanowires for deep ultraviolet optoelectronics. *APL Materials*, **2016**, 4, 086115	5.7	53
294	Nano- and Microstructure Engineering: An Effective Method for Creating High Efficiency Magnesium Silicide Based Thermoelectrics. *ACS Applied Materials & Interfaces*, **2016**, 8, 34431-34437	9.5	52
293	Phase formation of CaAl2O4 from CaCO3–Al2O3 powder mixtures. *Journal of the European Ceramic Society*, **2008**, 28, 747-756	6	51
292	Enhancement of resolution in core-loss and low-loss spectroscopy in a monochromated microscope. *Ultramicroscopy*, **2006**, 106, 1091-103	3.1	51
291	Nanocrystalline tungsten carbide (WC) synthesis/characterization and its possible application as a PEM fuel cell catalyst support. *Electrochimica Acta*, **2012**, 61, 198-206	6.7	50
290	Stable Hydrogen Storage Cycling in Magnesium Hydride, in the Range of Room Temperature to 300 °C, Achieved Using a New Bimetallic Cr-V Nanoscale Catalyst. *Journal of Physical Chemistry C*, **2012**, 116, 3188-3199	3.8	50
289	Surface-initiated atom transfer radical polymerization of polyhedral oligomeric silsesquioxane (POSS) methacrylate from flat silicon wafer. *Polymer*, **2006**, 47, 1119-1123	3.9	49
288	Corrosion of engineering materials in a supercritical water cooled reactor: Characterization of oxide scales on Alloy 800H and stainless steel 316. *Corrosion Science*, **2015**, 100, 222-230	6.8	48
287	Highly efficient binary copper-iron catalyst for photoelectrochemical carbon dioxide reduction toward methane. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 1330-1338	11.5	47
286	Three-dimensional investigation of cycling-induced microstructural changes in lithium-ion battery cathodes using focused ion beam/scanning electron microscopy. *Journal of Power Sources*, **2016**, 306, 300-308	8.9	46

285	Self-Assembled Functional DNA Superstructures as High-Density and Versatile Recognition Elements for Printed Paper Sensors. *Angewandte Chemie - International Edition*, **2018**, 57, 12440-12443	16.4	46
284	Element specific monolayer depth profiling. *Advanced Materials*, **2014**, 26, 6554-9	24	45
283	Selective electroreduction of CO2 to formate on 3D [100] Pb dendrites with nanometer-sized needle-like tips. *Journal of Materials Chemistry A*, **2017**, 5, 20747-20756	13	45
282	Highly Porous and Preferentially Oriented {100} Platinum Nanowires and Thin Films. *Advanced Functional Materials*, **2012**, 22, 4172-4181	15.6	45
281	Strain relief and AlSb buffer layer morphology in GaSb heteroepitaxial films grown on Si as revealed by high-angle annular dark-field scanning transmission electron microscopy. *Applied Physics Letters*, **2011**, 98, 082113	3.4	45
280	Scanning transmission electron microscopy investigation of the Si(111)/AlN interface grown by metalorganic vapor phase epitaxy. *Applied Physics Letters*, **2010**, 97, 251901	3.4	45
279	Experimental evidence of nanometer-scale confinement of plasmonic eigenmodes responsible for hot spots in random metallic films. *Physical Review B*, **2013**, 88,	3.3	44
278	Supramolecular Functionalization of Single-Walled Carbon Nanotubes with Conjugated Polyelectrolytes and Their Patterning on Surfaces. *Macromolecules*, **2008**, 41, 9869-9874	5.5	44
277	Surface-initiated atom transfer radical polymerization grafting of poly(2,2,2-trifluoroethyl methacrylate) from flat silicon wafer surfaces. *Journal of Polymer Science Part A*, **2006**, 44, 1252-1262	2.5	43
276	The cathodic behaviour of Al□Mn precipitates during atmospheric and saline aqueous corrosion of a sand-cast AM50 alloy. *Corrosion Science*, **2014**, 83, 299-309	6.8	42
275	Photochemical Carbon Dioxide Reduction on Mg-Doped Ga(In)N Nanowire Arrays under Visible Light Irradiation. *ACS Energy Letters*, **2016**, 1, 246-252	20.1	41
274	Nucleation and growth of Si nanocrystals in an amorphous SiO2 matrix. *Physical Review B*, **2006**, 74,	3.3	41
273	Unassisted solar water splitting with 9.8% efficiency and over 100 h stability based on Si solar cells and photoelectrodes catalyzed by bifunctional Ni□Mo/Ni. *Journal of Materials Chemistry A*, **2019**, 7, 2200-2209	13	39
272	Tracking the corrosion of magnesium sand cast AM50 alloy in chloride environments. *Corrosion Science*, **2013**, 75, 114-122	6.8	39
271	Ti4O7 supported Ru@Pt core□shell catalyst for CO-tolerance in PEM fuel cell hydrogen oxidation reaction. *Applied Energy*, **2013**, 103, 507-513	10.7	39
270	Synthesis and Electrophoretic Deposition of Single-Walled Carbon Nanotube Complexes with a Conjugated Polyelectrolyte. *Chemistry of Materials*, **2010**, 22, 2741-2749	9.6	39
269	Molecular beam epitaxial growth and characterization of Al(Ga)N nanowire deep ultraviolet light emitting diodes and lasers. *Journal Physics D: Applied Physics*, **2016**, 49, 364006	3	38
268	Spatially resolved surface valence gradient and structural transformation of lithium transition metal oxides in lithium-ion batteries. *Physical Chemistry Chemical Physics*, **2016**, 18, 29064-29075	3.6	38

267	Electron Energy-Loss Spectroscopy of Multipolar Edge and Cavity Modes in Silver Nanosquares. *ACS Photonics*, **2016**, 3, 428-433	6.3	38
266	A GaN:Sn nanoarchitecture integrated on a silicon platform for converting CO2 to HCOOH by photoelectrocatalysis. *Energy and Environmental Science*, **2019**, 12, 2842-2848	35.4	38
265	Asymmetric silver "nanocarrot" structures: solution synthesis and their asymmetric plasmonic resonances. *Journal of the American Chemical Society*, **2013**, 135, 9616-9	16.4	38
264	A novel CO-tolerant PtRu core–shell structured electrocatalyst with Ru rich in core and Pt rich in shell for hydrogen oxidation reaction and its implication in proton exchange membrane fuel cell. *Journal of Power Sources*, **2011**, 196, 9117-9123	8.9	38
263	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO Reduction. *Angewandte Chemie - International Edition*, **2020**, 59, 12860-12867	16.4	37
262	Atomic Resolution Coordination Mapping in Ca2FeCoO5 Brownmillerite by Spatially Resolved Electron Energy-Loss Spectroscopy. *Chemistry of Materials*, **2012**, 24, 1904-1909	9.6	37
261	Oxidation of Fe Nanoparticles Embedded in Single-Walled Carbon Nanotubes by Exposure to a Bright Flash of White Light. *Nano Letters*, **2002**, 2, 1277-1280	11.5	37
260	Atomic scale real-space mapping of holes in YBa2Cu3O(6+δ). *Nature Communications*, **2014**, 5, 4275	17.4	36
259	Formation of the Ternary Complex Hydride Mg2FeH6 from Magnesium Hydride (γMgH2) and Iron: An Electron Microscopy and Energy-Loss Spectroscopy Study. *Journal of Physical Chemistry C*, **2012**, 116, 25701-25714	3.8	36
258	Epitaxial thin films of multiferroic Bi2FeCrO6 with B-site cationic order. *Journal of Materials Research*, **2007**, 22, 2102-2110	2.5	36
257	Engineering the Low Coordinated Pt Single Atom to Achieve the Superior Electrocatalytic Performance toward Oxygen Reduction. *Small*, **2020**, 16, e2003096	11	36
256	Magneto-Thermal Metrics Can Mirror the Long-Term Intracellular Fate of Magneto-Plasmonic Nanohybrids and Reveal the Remarkable Shielding Effect of Gold. *Advanced Functional Materials*, **2017**, 27, 1605997	15.6	35
255	Unraveling the Rapid Performance Decay of Layered High-Energy Cathodes: From Nanoscale Degradation to Drastic Bulk Evolution. *ACS Nano*, **2018**, 12, 2708-2718	16.7	35
254	Selective area epitaxy of AlGaN nanowire arrays across nearly the entire compositional range for deep ultraviolet photonics. *Optics Express*, **2017**, 25, 30494-30502	3.3	35
253	Imaging, core-loss, and low-loss electron-energy-loss spectroscopy mapping in aberration-corrected STEM. *Microscopy and Microanalysis*, **2010**, 16, 416-24	0.5	34
252	Cobalt-Free Nickel-Rich Positive Electrode Materials with a Core–Shell Structure. *Chemistry of Materials*, **2019**, 31, 10150-10160	9.6	34
251	Multiple-interface coupling effects in local electron-energy-loss measurements of band gap energies. *Physical Review B*, **2007**, 76,	3.3	33
250	Electron energy loss spectroscopy of interfacial layer formation in Gd2O3 films deposited directly on Si(001). *Journal of Applied Physics*, **2002**, 91, 2921-2928	2.5	33

249	Electroreduction of CO2 to formate on amine modified Pb electrodes. *Journal of Materials Chemistry A*, **2019**, 7, 11272-11281	13	32
248	Size-Mediated Recurring Spinel Sub-nanodomains in Li- and Mn-Rich Layered Cathode Materials. *Angewandte Chemie - International Edition*, **2020**, 59, 14313-14320	16.4	32
247	Resonant optical excitations in complementary plasmonic nanostructures. *Optics Express*, **2012**, 20, 6968-73	3.5	32
246	Towards calibration-invariant spectroscopy using deep learning. *Scientific Reports*, **2019**, 9, 2126	4.9	31
245	Electron Energy Loss Spectroscopy Investigation into Symmetry in Gold Trimer and Tetramer Plasmonic Nanoparticle Structures. *ACS Nano*, **2016**, 10, 8552-63	16.7	31
244	Atomic Ordering in InGaN Alloys within Nanowire Heterostructures. *Nano Letters*, **2015**, 15, 6413-8	11.5	30
243	Toward 10 meV electron energy-loss spectroscopy resolution for plasmonics. *Microscopy and Microanalysis*, **2014**, 20, 767-78	0.5	30
242	High-Efficiency InGaN/GaN Dot-in-a-Wire Red Light-Emitting Diodes. *IEEE Photonics Technology Letters*, **2012**, 24, 321-323	2.2	30
241	Uncovering the nature of electroactive sites in nano architectured dendritic Bi for highly efficient CO2 electroreduction to formate. *Applied Catalysis B: Environmental*, **2020**, 274, 119031	21.8	29
240	Strain fields around dislocation arrays in a Σ silicon bicrystal measured by scanning transmission electron microscopy. *Philosophical Magazine*, **2013**, 93, 1250-1267	1.6	29
239	Growth mechanisms of GaSb heteroepitaxial films on Si with an AlSb buffer layer. *Journal of Applied Physics*, **2013**, 114, 113101	2.5	28
238	Magnetocaloric effect in Ni-Mn-Ga thin films under concurrent magnetostructural and Curie transitions. *Journal of Applied Physics*, **2011**, 110, 013910	2.5	28
237	Self-Similarity of Plasmon Edge Modes on Koch Fractal Antennas. *ACS Nano*, **2017**, 11, 11240-11249	16.7	27
236	Visualizing biointerfaces in three dimensions: electron tomography of the bone-hydroxyapatite interface. *Journal of the Royal Society Interface*, **2010**, 7, 1497-501	4.1	27
235	Iron oxyhydroxide colloid formation by gamma-radiolysis. *Physical Chemistry Chemical Physics*, **2011**, 13, 7198-206	3.6	27
234	Biaxial ZnO/ZnS Nanoribbon Heterostructures. *Journal of Physical Chemistry C*, **2009**, 113, 4755-4757	3.8	27
233	Impact of a Titanium-Based Surface Coating Applied to Li[Ni0.5Mn0.3Co0.2]O2 on Lithium-Ion Cell Performance. *ACS Applied Energy Materials*, **2018**, 1, 7052-7064	6.1	26
232	Electrochemical Valorization of Glycerol on Ni-Rich Bimetallic NiPd Nanoparticles: Insight into Product Selectivity Using in Situ Polarization Modulation Infrared-Reflection Absorption Spectroscopy. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 14425-14434	8.3	25

231	Lattice distortions and octahedral rotations in epitaxially strained LaNiO3/LaAlO3 superlattices. *Applied Physics Letters*, **2014**, 104, 221909	3.4	25
230	Atomically resolved EELS mapping of the interfacial structure of epitaxially strained LaNiO3/LaAlO3 superlattices. *Physical Review B*, **2014**, 90,	3.3	25
229	Artificial Solids by Design: Assembly and Electron Microscopy Study of Nanosheet-Derived Heterostructures. *Chemistry of Materials*, **2013**, 25, 4892-4900	9.6	25
228	Local Hydrogen Fluxes Correlated to Microstructural Features of a Corroding Sand Cast AM50 Magnesium Alloy. *Journal of the Electrochemical Society*, **2014**, 161, C557-C564	3.9	24
227	Synthesis of Cu□Pd alloy thin films by co-electrodeposition. *Electrochimica Acta*, **2011**, 56, 7397-7403	6.7	24
226	2D strain mapping using scanning transmission electron microscopy Moiré interferometry and geometrical phase analysis. *Ultramicroscopy*, **2018**, 187, 1-12	3.1	23
225	Synthesis of Pd and Nb□doped TiO2 composite supports and their corresponding Pt□Pd alloy catalysts by a two-step procedure for the oxygen reduction reaction. *Journal of Power Sources*, **2013**, 221, 232-241	8.9	23
224	Broken Band Alignment in EuS-CdS Nanoheterostructures. *Chemistry of Materials*, **2011**, 23, 181-187	9.6	23
223	Three-dimensional atomic structure of metastable nanoclusters in doped semiconductors. *Physical Review Letters*, **2011**, 107, 186104	7.4	23
222	Epitaxially stabilized thin films of □FeO (001) grown on YSZ (100). *Scientific Reports*, **2017**, 7, 3712	4.9	22
221	Plasmonic Coupling of Multipolar Edge Modes and the Formation of Gap Modes. *ACS Photonics*, **2017**, 4, 1558-1565	6.3	22
220	Evidence of Eu2+ 4f electrons in the valence band spectra of EuTiO3 and EuZrO3. *Journal of Applied Physics*, **2012**, 112, 083719	2.5	22
219	Effects of bond character on the electronic structure of brownmillerite-phase oxides, Ca2B?xFe2□O5 (B? = Al, Ga): an X-ray absorption and electron energy loss spectroscopic study. *Journal of Materials Chemistry*, **2009**, 19, 9213		22
218	Ultralow Loading and High-Performing Pt Catalyst for a Polymer Electrolyte Membrane Fuel Cell Anode Achieved by Atomic Layer Deposition. *ACS Catalysis*, **2019**, 9, 5365-5374	13.1	21
217	In situ controlled modification of the helium density in single helium-filled nanobubbles. *Journal of Applied Physics*, **2014**, 115, 123508	2.5	21
216	Microscopic investigation of single-crystal diamond following ultrafast laser irradiation. *Applied Physics A: Materials Science and Processing*, **2011**, 103, 185-192	2.6	21
215	Preparation of Ni-g-polymer core□shell nanoparticles by surface-initiated atom transfer radical polymerization. *Polymer*, **2009**, 50, 4293-4298	3.9	21
214	Structural and transport properties of epitaxial niobium-doped BaTiO3 films. *Applied Physics Letters* , **2008**, 93, 192114	3.4	21

213	Europium-doped ZnO nanosponges □ controlling optical properties and photocatalytic activity. *Journal of Materials Chemistry C*, **2019**, 7, 3909-3919	7.1	20
212	Modification of Nickel Surfaces by Bismuth: Effect on Electrochemical Activity and Selectivity toward Glycerol. *ACS Applied Materials & Interfaces*, **2020**, 12, 15095-15107	9.5	20
211	Cu□e and Cu Nanocrystals as Local Sources of Copper in Thermally Activated In Situ Cation Exchange. *ACS Nano*, **2016**, 10, 2406-14	16.7	20
210	Surface Segregation of Fe in Pt-Fe Alloy Nanoparticles: Its Precedence and Effect on the Ordered-Phase Evolution during Thermal Annealing. *ChemCatChem*, **2015**, 7, 3655-3664	5.2	20
209	Selective Electrooxidation of Glycerol to Formic Acid over Carbon Supported Ni1□Mx (M = Bi, Pd, and Au) Nanocatalysts and Coelectrolysis of CO2. *ACS Applied Energy Materials*, **2020**, 3, 8725-8738	6.1	20
208	Interplay of strain and indium incorporation in InGaN/GaN dot-in-a-wire nanostructures by scanning transmission electron microscopy. *Nanotechnology*, **2015**, 26, 344002	3.4	19
207	Dual-Site-Mediated Hydrogenation Catalysis on Pd/NiO: Selective Biomass Transformation and Maintenance of Catalytic Activity at Low Pd Loading. *ACS Catalysis*, **2020**, 10, 5483-5492	13.1	19
206	Evaluating focused ion beam and ultramicrotome sample preparation for analytical microscopies of the cathode layer of a polymer electrolyte membrane fuel cell. *Journal of Power Sources*, **2016**, 312, 23-35	8.9	19
205	Localized Corrosion Behavior of AZ31B Magnesium Alloy with an Electrodeposited Poly(3,4-Ethylenedioxythiophene) Coating. *Journal of the Electrochemical Society*, **2015**, 162, C536-C544	3.9	19
204	The role of vicinal silicon surfaces in the formation of epitaxial twins during the growth of III-V thin films. *Journal of Applied Physics*, **2011**, 110, 124316	2.5	19
203	Self-Constructed Multiple Plasmonic Hotspots on an Individual Fractal to Amplify Broadband Hot Electron Generation. *ACS Nano*, **2021**, 15, 10553-10564	16.7	19
202	Enhanced figure of merit in Mg2Si0.877Ge0.1Bi0.023/multi wall carbon nanotube nanocomposites. *RSC Advances*, **2015**, 5, 65328-65336	3.7	18
201	Synthesis and structural evolution of Pt nanotubular skeletons: revealing the source of the instability of nanostructured electrocatalysts. *Journal of Materials Chemistry A*, **2015**, 3, 12663-12671	13	18
200	Solute Segregation During Ferrite Growth: Solute/Interphase and Substitutional/Interstitial Interactions. *Jom*, **2016**, 68, 1329-1334	2.1	18
199	Bone response to free-form fabricated hydroxyapatite and zirconia scaffolds: a transmission electron microscopy study in the human maxilla. *Clinical Implant Dentistry and Related Research*, **2012**, 14, 461-9	3.9	18
198	Local structure and thermoelectric properties of Mg2Si0.977□e Bi0.023 (0.1 ?x? 0.4). *Journal of Alloys and Compounds*, **2015**, 644, 249-255	5.7	18
197	A vacancy-disordered, oxygen-deficient perovskite with long-range magnetic ordering: local and average structures and magnetic properties of Sr2Fe1.5Cr0.5O5. *Inorganic Chemistry*, **2012**, 51, 2638-44	5.1	18
196	Self-activated reversibility in the magnetically induced reorientation of martensitic variants in ferromagnetic Ni-Mn-Ga films. *Physical Review B*, **2010**, 81,	3.3	18

195	Seeing structures and measuring properties with transmission electron microscopy images: A simple combination to study size effects in nanoparticle systems. *Applied Physics Letters*, **2009**, 94, 263116	3.4	18
194	Analytical electron microscopy studies of lithium aluminum hydrides with Ti- and V-based additives. *Journal of Physical Chemistry B*, **2005**, 109, 4350-6	3.4	18
193	Targeting low-cost type-II heterostructures: Synthesis, structure and photoreactivity. *Journal of Alloys and Compounds*, **2017**, 698, 944-956	5.7	17
192	Multivariate-aided mapping of rare-earth partitioning in a wrought magnesium alloy. *Scripta Materialia*, **2016**, 124, 174-178	5.6	17
191	Analytical electron microscopy of a crack tip extracted from a stressed Alloy 800 sample exposed to an acid sulfate environment. *Micron*, **2014**, 61, 62-9	2.3	17
190	Metallic and semiconducting single-walled carbon nanotubes: differentiating individual SWCNTs by their carbon 1s spectra. *ACS Nano*, **2012**, 6, 10965-72	16.7	17
189	Structural and multiferroic properties of epitaxial □Fe2O3□BiFeO3/Bi3.25La0.75Ti3O12composite bi-layers. *Journal Physics D: Applied Physics*, **2008**, 41, 112002	3	17
188	InGaN/Si Double-Junction Photocathode for Unassisted Solar Water Splitting. *ACS Energy Letters*, **2020**, 5, 3741-3751	20.1	17
187	Liquid Cell Transmission Electron Microscopy Sheds Light on The Mechanism of Palladium Electrodeposition. *Langmuir*, **2019**, 35, 862-869	4	17
186	Mapping defects in a carbon nanotube by momentum transfer dependent electron energy loss spectromicroscopy. *Ultramicroscopy*, **2012**, 113, 158-164	3.1	16
185	Compositional and Morphological Changes of Ordered PtxFey/C Oxygen Electroreduction Catalysts. *ChemCatChem*, **2013**, 5, 1449-1460	5.2	16
184	Review□Multifunctional Separators: A Promising Approach for Improving the Durability and Performance of Li-Ion Batteries. *Journal of the Electrochemical Society*, **2019**, 166, A5369-A5377	3.9	15
183	Effect of Silicon Carbide Nanoparticles on the Grain Boundary Segregation and Thermoelectric Properties of Bismuth Doped Mg2Si0.7Ge0.3. *Journal of Electronic Materials*, **2016**, 45, 6052-6058	1.9	15
182	Surface modification and cathodic electrophoretic deposition of ceramic materials and composites using celestine blue dye. *RSC Advances*, **2014**, 4, 29652	3.7	15
181	Electron energy loss spectroscopy studies of the amorphous to crystalline transition in FeF3. *Journal of Applied Physics*, **1999**, 86, 2499-2504	2.5	15
180	Phosphorus oxide gate dielectric for black phosphorus field effect transistors. *Applied Physics Letters*, **2018**, 112, 173101	3.4	14
179	Nanoscale mechanism of the stabilization of nanoporous gold by alloyed platinum. *Nanoscale*, **2018**, 10, 4904-4912	7.7	14
178	Real-space localization and quantification of hole distribution in chain-ladder Sr3Ca11Cu24O41 superconductor. *Science Advances*, **2016**, 2, e1501652	14.3	14

177	Atomic structure and bonding of the interfacial bilayer between Au nanoparticles and epitaxially regrown MgAl2O4 substrates. *Applied Physics Letters*, **2014**, 105, 231607	3.4	14
176	Probing bonding and electronic structure at atomic resolution with spectroscopic imaging. *MRS Bulletin*, **2012**, 37, 21-28	3.2	14
175	Synthesis of hierarchical structured porous MoS2/SiO2 microspheres by ultrasonic spray pyrolysis. *Canadian Journal of Chemical Engineering*, **2012**, 90, 330-335	2.3	14
174	Locating La atoms in epitaxial Bi3.25La0.75Ti3O12 films through atomic resolution electron energy loss spectroscopy mapping. *Applied Physics Letters*, **2009**, 95, 192902	3.4	14
173	Volume fraction measurement of dispersoids in a thin foil by parallel energy-loss spectroscopy: development and assessment of the technique. *Journal of Microscopy*, **1995**, 180, 217-229	1.9	14
172	Temperature-dependent high energy-resolution EELS of ferroelectric and paraelectric BaTiO3 phases. *Physical Review B*, **2016**, 93,	3.3	13
171	Oxygen 1s excitation and tetragonal distortion from core-hole effect in BaTiO3. *Physical Review B*, **2013**, 88,	3.3	13
170	AuPt Alloy on TiO2: A Selective and Durable Catalyst for L-Sorbose Oxidation to 2-Keto-Gulonic Acid. *ChemSusChem*, **2015**, 8, 4189-94	8.3	13
169	Atomic-resolution study of polarity reversal in GaSb grown on Si by scanning transmission electron microscopy. *Journal of Applied Physics*, **2012**, 112, 093101	2.5	13
168	Coexistence of A- and B-Site Vacancy Compensation in La-Doped Sr1□BaxTiO3. *Journal of the American Ceramic Society*, **2010**, 93, 2903-2908	3.8	13
167	Probing the performance of structurally controlled platinum-cobalt bimetallic catalysts for selective hydrogenation of cinnamaldehyde. *Journal of Catalysis*, **2020**, 388, 164-170	7.3	13
166	An In0.5Ga0.5N nanowire photoanode for harvesting deep visible light photons. *APL Materials*, **2016**, 4, 076106	5.7	13
165	GaN nanowires as a reusable photoredox catalyst for radical coupling of carbonyl under blacklight irradiation. *Chemical Science*, **2020**, 11, 7864-7870	9.4	12
164	Synthesis and Optical Properties of Linker-Free TiO2/CdSe Nanorods. *Journal of Physical Chemistry C*, **2014**, 118, 3347-3358	3.8	12
163	Primary Oxide Latent Storage and Spillover Enabling Electrocatalysts with Reversible Oxygen Electrode Properties and the Alterpolar Revertible (PEMFC versus WE) Cell. *Journal of Physical Chemistry C*, **2014**, 118, 8723-8746	3.8	12
162	Thermodynamically destabilized hydride formation in "bulk" Mg-AlTi multilayers for hydrogen storage. *Physical Chemistry Chemical Physics*, **2013**, 15, 16432-6	3.6	12
161	Structure, ordering, and surfaces of Pt-Fe alloy catalytic nanoparticles from quantitative electron microscopy and X-ray diffraction. *Nanoscale*, **2012**, 4, 7273-9	7.7	12
160	Direct observation of anti-phase boundaries in heteroepitaxy of GaSb thin films grown on Si(001) by transmission electron microscopy. *Journal of Applied Physics*, **2012**, 112, 074306	2.5	12

159	Sub-Ångstrom experimental validation of molecular dynamics for predictive modeling of extended defect structures in Si. *Physical Review Letters*, **2013**, 110, 166102	7.4	12
158	Thermoelectric properties of A0.05Mo3Sb5.4Te1.6 (A=Mn, Fe, Co, Ni). *Journal of Alloys and Compounds*, **2010**, 504, 314-319	5.7	12
157	Changes in the iron white-line ratio in the electron energy-loss spectrum of iron-copper multilayers. *Journal of Microscopy*, **1995**, 180, 288-293	1.9	12
156	Investigating the Removal of Layered Double Hydroxides in [Ni0.80Co0.15]0.95-xAl0.05+x(OH)2(x = 0, 0.05) Prepared by Coprecipitation. *Journal of the Electrochemical Society*, **2018**, 165, A2781-A2791	3.9	12
155	In Liquid Observation and Quantification of Nucleation and Growth of Gold Nanostructures Using in Situ Transmission Electron Microscopy. *Journal of Physical Chemistry C*, **2017**, 121, 7435-7441	3.8	11
154	Efficient Graphene Production by Combined Bipolar Electrochemical Intercalation and High-Shear Exfoliation. *ACS Omega*, **2017**, 2, 6492-6499	3.9	11
153	Atomic-level 2-dimensional chemical mapping and imaging of individual dopants in a phosphor crystal. *Physical Chemistry Chemical Physics*, **2013**, 15, 11420-6	3.6	11
152	Ablation and structural changes induced in InP surfaces by single 10 fs laser pulses in air. *Journal of Applied Physics*, **2009**, 106, 074907	2.5	11
151	A Low-Cost Instrument for Dry Particle Fusion Coating of Advanced Electrode Material Particles at the Laboratory Scale. *Journal of the Electrochemical Society*, **2020**, 167, 110509	3.9	10
150	The Effect of Interdiffusion on the Properties of Lithium-Rich Core-Shell Cathodes. *Journal of the Electrochemical Society*, **2016**, 163, A2841-A2848	3.9	10
149	Efficient Nitrogen Fixation Catalyzed by Gallium Nitride Nanowire Using Nitrogen and Water. *IScience*, **2019**, 17, 208-216	6.1	10
148	Studying Tomorrow's Materials Today: Insights with Quantitative STEM, EELS. *Microscopy and Microanalysis*, **2014**, 20, 78-79	0.5	10
147	Homogenization Study of the Effects of Cycling on the Electronic Conductivity of Commercial Lithium-Ion Battery Cathodes. *Journal of Physical Chemistry C*, **2015**, 119, 12199-12208	3.8	10
146	Imaging high-energy electrons propagating in a crystal. *Physical Review Letters*, **2011**, 106, 160802	7.4	10
145	Structural origin of the high-performance light-emitting InGaN/AlGaN quantum disks. *Nanoscale*, **2019**, 11, 8994-8999	7.7	9
144	Theory, Substantiation, and Properties of Novel Reversible Electrocatalysts for Oxygen Electrode Reactions. *Journal of Physical Chemistry C*, **2015**, 119, 11267-11285	3.8	9
143	Corrosion Product Formation Monitored Using the Feedback Mode of Scanning Electrochemical Microscopy with Carbon Microelectrodes. *Journal of the Electrochemical Society*, **2015**, 162, C677-C683	3.9	9
142	Tilted epitaxy on (211)-oriented substrates. *Applied Physics Letters*, **2013**, 102, 132103	3.4	9

141	STEM HAADF Tomography of Molybdenum Disulfide with Mesoporous Structure. *ChemCatChem*, **2011**, 3, 999-1003	5.2	9
140	Piezoresponse force microscopy and magnetic force microscopy characterization of Fe2O3BiFeO3 nanocomposite/Bi3.25La0.75Ti3O12 multiferroic bilayers. *Journal of Magnetism and Magnetic Materials*, **2009**, 321, 1799-1802	2.8	9
139	Single atomic layer detection of Ca and defect characterization of Bi-2212 with EELS in HA-ADF STEM. *Ultramicroscopy*, **2006**, 106, 1076-81	3.1	9
138	Tunable Syngas Production from CO2 and H2O in an Aqueous Photoelectrochemical Cell. *Angewandte Chemie*, **2016**, 128, 14474-14478	3.6	9
137	Preformed Au colloidal nanoparticles immobilised on NiO as highly efficient heterogeneous catalysts for reduction of 4-nitrophenol to 4-aminophenol. *Journal of Environmental Chemical Engineering*, **2019**, 7, 103381	6.8	9
136	Real-space mapping of electronic orbitals. *Ultramicroscopy*, **2017**, 177, 26-29	3.1	8
135	Nanoscale analysis of structural and chemical changes in aged hybrid Pt/NbOx/C fuel cell catalysts. *Journal of Power Sources*, **2017**, 356, 140-152	8.9	8
134	Electrochemical promotion of Bi-metallic Ni9Pd core double-shell nanoparticles for complete methane oxidation. *Journal of Catalysis*, **2019**, 374, 127-135	7.3	8
133	High resolution transmission electron microscopy (TEM), energy-dispersive X-ray spectroscopy (EDS) and X-ray diffraction studies of nanocrystalline manganese borohydride (Mn(BH4)2) after mechano-chemical synthesis and thermal dehydrogenation. *Acta Materialia*, **2015**, 100, 392-400	8.4	8
132	Biomimetic design of monolithic fuel cell electrodes with hierarchical structures. *Nano Energy*, **2016**, 20, 57-67	17.1	8
131	Diols Production From Glycerol Over Pt-Based Catalysts: On the Role Played by the Acid Sites of the Support. *Catalysis Letters*, **2017**, 147, 2523-2533	2.8	8
130	(100) MgAl2O4 as a lattice-matched substrate for the epitaxial thin film deposition of the relaxor ferroelectric PMN-PT. *Applied Physics A: Materials Science and Processing*, **2010**, 98, 187-194	2.6	8
129	Cross-sectional study of femtosecond laser bulk modification of crystalline quartz. *Applied Physics A: Materials Science and Processing*, **2010**, 98, 849-853	2.6	8
128	Investigation of the electronic structure of the cubic spinel Cu1.2Mn1.8O4 using electron energy loss spectroscopy. *Solid State Ionics*, **2008**, 179, 718-724	3.3	8
127	Electron inelastic scattering and anisotropy: The two-dimensional point of view. *Ultramicroscopy*, **2006**, 106, 1082-90	3.1	8
126	Sampling optimization of Moir geometrical phase analysis for strain characterization in scanning transmission electron microscopy. *Ultramicroscopy*, **2020**, 209, 112858	3.1	8
125	Coupling of bias-induced crystallographic shear planes with charged domain walls in ferroelectric oxide thin films. *Physical Review B*, **2016**, 94,	3.3	8
124	Elucidating the Li-Ion Battery Performance Benefits Enabled by Multifunctional Separators. *ACS Applied Energy Materials*, **2018**, 1, 1878-1882	6.1	8

123	Electronic Structure and Elastic Properties of Strongly Correlated Metal Oxides from First Principles: LSDA + U, SIC-LSDA and EELS Study of UO2 and NiO **1998**, 166, 429		8
122	Interface Segregation and Nitrogen Measurement in Fe-Mn-N Steel by Atom Probe Tomography. *Microscopy and Microanalysis*, **2017**, 23, 385-395	0.5	7
121	PtRu Alloy Nanoparticles I. Physicochemical Characterizations of Structures Formed as a Function of the Type of Deposition and Their Evolutions on Annealing. *Journal of Physical Chemistry C*, **2017**, 121, 23104-23119	3.8	7
120	Carving Plasmon Modes in Silver Sierpi□ki Fractals. *ACS Photonics*, **2019**, 6, 2974-2984	6.3	7
119	Revealing the Effects of Trace Oxygen Vacancies on Improper Ferroelectric Manganite with In Situ Biasing. *Advanced Electronic Materials*, **2019**, 5, 1800827	6.4	7
118	Size-Mediated Recurring Spinel Sub-nanodomains in Li- and Mn-Rich Layered Cathode Materials. *Angewandte Chemie*, **2020**, 132, 14419-14426	3.6	7
117	Heterogeneous diamond phases in compressed graphite studied by electron energy-loss spectroscopy. *Diamond and Related Materials*, **2016**, 64, 190-196	3.5	7
116	The 3D Nanoscale Evolution of Platinum□Niobium Oxide Fuel Cell Catalysts via Identical Location Electron Tomography. *Particle and Particle Systems Characterization*, **2017**, 34, 1700051	3.1	7
115	Evidence for an equilibrium epitaxial complexion at the Au-MgAl2O4 interface. *Applied Physics Letters*, **2015**, 107, 241601	3.4	7
114	Energy Loss Near-Edge Structures **2011**, 207-245		7
113	Unveiling the role of surface, size, shape and defects of iron oxide nanoparticles for theranostic applications. *Nanoscale*, **2021**, 13, 14552-14571	7.7	7
112	Electronic Structure and Elastic Properties of Strongly Correlated Metal Oxides from First Principles: LSDA + U, SIC-LSDA and EELS Study of UO2 and NiO **1998**, 166, 429		7
111	Characterization of Localized Filament Corrosion Products at the Anodic Head on a Model Mg-Zn-Zr Alloy Surface. *Corrosion*, **2017**, 73, 518-525	1.8	6
110	Bulk Immiscibility at the Edge of the Nanoscale. *ACS Nano*, **2017**, 11, 10984-10991	16.7	6
109	Damage behavior and atomic migration in MgAl2O4 under an 80 keV scanning focused probe in a STEM. *Micron*, **2015**, 68, 141-145	2.3	6
108	Strain-free ultrathin AlN epilayers grown directly on sapphire by high-temperature molecular beam epitaxy. *Applied Physics Letters*, **2020**, 116, 152102	3.4	6
107	Resonant Optical Antennas with Atomic-Sized Tips and Tunable Gaps Achieved by Mechanical Actuation and Electrical Control. *Nano Letters*, **2020**, 20, 4346-4353	11.5	6
106	Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO2 Reduction. *Angewandte Chemie*, **2020**, 132, 12960-12967	3.6	6

105	The performance evaluation of direct detection electron energy-loss spectroscopy at 200 kV and 80 kV accelerating voltages. *Ultramicroscopy*, **2020**, 212, 112942	3.1	6
104	Advances in nanoscale characterization of refined nanoporous gold. *Electrochimica Acta*, **2018**, 283, 611-618	6.6	6
103	Modeling and experimental characterization of stepped and v-shaped {311} defects in silicon. *Journal of Applied Physics*, **2014**, 115, 143514	2.5	6
102	Structure and morphology of Pt3Sc alloy thin film prepared by pulsed laser deposition. *Thin Solid Films*, **2012**, 524, 127-132	2.2	6
101	Lattice-registered growth of GaSb on Si (211) with molecular beam epitaxy. *Journal of Applied Physics*, **2012**, 112, 093103	2.5	6
100	Atomic-scale Ge diffusion in strained Si revealed by quantitative scanning transmission electron microscopy. *Physical Review B*, **2013**, 87,	3.3	6
99	Quantitative compositional analysis and strain study of InAs quantum wires with InGaAlAs barrier layers. *Journal of Applied Physics*, **2009**, 105, 094313	2.5	6
98	Plasmon coupling and finite size effects in metallic multilayers. *Journal of Microscopy*, **1997**, 187, 184-192	1.9	6
97	Mechanism of Action of the Tungsten Dopant in LiNiO 2 Positive Electrode Materials. *Advanced Energy Materials*, **2022**, 12, 2103067	21.8	6
96	Growth and kinetic Monte Carlo simulation of InAs quantum wires on vicinal substrates. *Journal of Crystal Growth*, **2015**, 412, 87-94	1.6	5
95	Hierarchical Plasmon Resonances in Fractal Structures. *ACS Photonics*, **2020**, 7, 1246-1254	6.3	5
94	Direct observation of indium precipitates in silicon following high dose ion implantation. *Semiconductor Science and Technology*, **2013**, 28, 125012	1.8	5
93	Annealing Effects on the Chemical Configuration of Uncapped and (Poly-Si)-Capped HfO[sub x]N[sub y] Films Deposited on Si(001). *Journal of the Electrochemical Society*, **2005**, 152, F101	3.9	5
92	Vertically Aligned Ni Nanowires as a Platform for Kinetically Limited Water-Splitting Electrocatalysis. *Journal of Physical Chemistry C*, **2019**, 123, 1082-1093	3.8	5
91	Remarkably Stable Nickel Hydroxide Nanoparticles for Miniaturized Electrochemical Energy Storage. *ACS Applied Energy Materials*, **2020**, 3, 7294-7305	6.1	4
90	Effect of water vapour partial pressure on the chromia (Cr2O3)-based scale stability. *Canadian Metallurgical Quarterly*, **2018**, 57, 89-98	0.9	4
89	Correlative electron energy loss spectroscopy and cathodoluminescence spectroscopy on three-dimensional plasmonic split ring resonators. *Microscopy (Oxford, England)*, **2018**, 67, i40-i51	1.3	4
88	Deposition and morphological evolution of nanostructured palladium during potential cycling: a liquid-cell TEM study. *Chemical Communications*, **2019**, 55, 9204-9207	5.8	4

87	A "thickness series": weak signal extraction of ELNES in EELS spectra from surfaces. *Microscopy and Microanalysis*, **2014**, 20, 649-57	0.5	4
86	Microstructure and ferroic properties of epitaxial [□Fe2O3□BiFeO3]□Bi3.25La0.75Ti3O12 composite bilayers. *Journal of Applied Physics*, **2010**, 108, 114111	2.5	4
85	InAs quantum wire induced composition modulation in an In0.53Ga0.37Al0.10As barrier layer grown on an InP substrate. *Journal of Applied Physics*, **2010**, 108, 034321	2.5	4
84	Ionomer content optimization in nickel-iron-based anodes with and without ceria for anion exchange membrane water electrolysis. *Journal of Power Sources*, **2021**, 514, 230563	8.9	4
83	Analytical Electron Microscopy. *Springer Handbooks*, **2019**, 345-453	1.3	4
82	2D Antimony-Arsenic Alloys. *Small*, **2020**, 16, e1906540	11	4
81	Amorphous Ni-Based Nanoparticles for Alkaline Oxygen Evolution. *ACS Applied Nano Materials*, **2020**, 3, 10522-10530	5.6	4
80	Influence of Pd and Au on electrochemical valorization of glycerol over Ni-rich surfaces. *Journal of Catalysis*, **2021**, 396, 1-13	7.3	4
79	Revealing the Structure Evolution of Heterogeneous Pd Catalyst in Suzuki Reaction via the Identical Location Transmission Electron Microscopy. *ACS Nano*, **2021**, 15, 8621-8637	16.7	4
78	Electron Energy Loss Spectroscopy as a Tool to Probe the Electronic Structure in Intermetallic Alloys **1997**, 175-180		4
77	Reactions in a multilayered Si (substrate)/Ta/Mg/Fe/Ta/Pd thin-film structure during annealing and deuterium absorption. *Acta Materialia*, **2015**, 90, 259-271	8.4	3
76	Two-dimensional X-ray diffraction and transmission electron microscopy study on the effect of magnetron sputtering atmosphere on GaN/SiC interface and gallium nitride thin film crystal structure. *Journal of Applied Physics*, **2015**, 117, 115301	2.5	3
75	Silicon effects on the wet oxidation of type 310 stainless steel. *Corrosion Science*, **2018**, 143, 376-389	6.8	3
74	Effects of Sample Preparation Technique on Quantitative Analysis of Automotive Fuel Cell Catalyst Layers. *Microscopy and Microanalysis*, **2014**, 20, 472-473	0.5	3
73	Effect of layer separation, InAs thickness, and rapid thermal annealing on the optical emission from a multi-layer quantum wire structure. *Journal of Applied Physics*, **2011**, 109, 124311	2.5	3
72	Local Electronic Structure of Defects in GaN From Spatially Resolved Electron Energy-Loss Spectroscopy. *Materials Research Society Symposia Proceedings*, **1997**, 482, 784		3
71	Probing the electronic structure of complex crystals with electron energy loss spectroscopy: a study ofnatisites. *Journal of Physics Condensed Matter*, **2006**, 18, 3629-3637	1.8	3
70	Correlating the mechanical strength of positive electrode material particles to their capacity retention. *Cell Reports Physical Science*, **2022**, 3, 100714	6.1	3

69	Synthesis of high-oxidation Y-Ba-Cu-O phases in superoxygenated thin films. *Physical Review Materials*, **2018**, 2,	3.2	3
68	Highly Active Nickel–Iron Nanoparticles With and Without Ceria for the Oxygen Evolution Reaction. *Electrocatalysis*, **2021**, 12, 605-618	2.7	3
67	The Performance of Electron Counting Direct Detection in Electron Energy Loss Spectroscopy. *Microscopy and Microanalysis*, **2019**, 25, 586-587	0.5	2
66	Electron energy-loss spectroscopy of surface plasmon activity in wrinkled gold structures. *Journal of Chemical Physics*, **2020**, 153, 224703	3.9	2
65	Structural investigation of interface and defects in epitaxial Bi3.25La0.75Ti3O12 film on SrRuO3/SrTiO3 (111) and (100). *Journal of Applied Physics*, **2013**, 113, 044102	2.5	2
64	The Canadian Centre for Electron Microscopy: a national facility for ultrahigh resolution electron microscopy. *International Journal of Nanotechnology*, **2008**, 5, 1082	1.5	2
63	Materials Science Applications Of A Monochromated TEM. *Microscopy and Microanalysis*, **2003**, 9, 112-113	0.5	2
62	High-Resolution EELS and ab initio Study of the Oxygen K Edges in Bulk Perovskites. *Microscopy and Microanalysis*, **2004**, 10, 852-853	0.5	2
61	Pnictogens Allotropy and Phase Transformation during van der Waals Growth. *Nano Letters*, **2020**, 20, 8258-8266	11.5	2
60	Core–Shell Nanocuboid Dimers with Nanometric Gaps. *Journal of Physical Chemistry C*, **2020**, 124, 18690-18697	3	2
59	Sub-4 nm Nanodiamonds from Graphene-Oxide and Nitrated Polycyclic Aromatic Hydrocarbons at 423 K. *ACS Nano*, **2021**,	16.7	2
58	A nanoscale investigation on the influence of anodization parameters during plasma electrolytic oxidation of titanium by high-resolution electron energy loss spectroscopy. *Applied Surface Science*, **2021**, 570, 151133	6.7	2
57	High-Voltage Induced Surface and Intragranular Structural Evolution of Ni-Rich Layered Cathode.. *Small*, **2022**, e2200627	11	2
56	Atomic Scale Structure and Chemistry Study of Franckeite - A Natural van-der-Waals Heterostructure - Using Scanning Transmission Electron Microscopy and Atom Probe Tomography. *Microscopy and Microanalysis*, **2020**, 26, 1642-1643	0.5	1
55	Nanoscale Structural and Emission Properties within Russian Doll–Type InGaN/AlGaN Quantum Wells. *Advanced Optical Materials*, **2020**, 8, 2000481	8.1	1
54	A dominant electron trap in molecular beam epitaxial InAlN lattice-matched to GaN. *Journal Physics D: Applied Physics*, **2018**, 51, 14LT01	3	1
53	Real-space mapping of electronic orbitals **2016**, 839-840		1
52	Machine-Learning Aided Evolution Studies of Nano-composite Electrodes and Nano-particle Catalysts for Fuel Cell Applications. *Microscopy and Microanalysis*, **2015**, 21, 1063-1066	0.5	1

51	Ultrastructural characterisation of the hydroxyapatite-coated pedicle screw and human bone interface. *International Journal of Nano and Biomaterials*, **2012**, 4, 1	0.2	1
50	Characterization of the Inhibition Layer on Galvanized Interstitial Free Steels. *Microscopy and Microanalysis*, **2002**, 8, 358-359	0.5	1
49	Electron Beam Induced Crystallisation in Iron (III) Fluoride. *Materials Research Society Symposia Proceedings*, **1995**, 398, 195		1
48	Advances in ultrahigh-energy resolution EELS: phonons, infrared plasmons and strongly coupled modes.. *Microscopy (Oxford, England)*, **2022**, 71, i174-i199	1.3	1
47	Platinum single-atom and cluster catalysis of the hydrogen evolution reaction		1
46	Eels Near Edge Structures **1999**, 265-300		1
45	Toroidal dipole plasmon resonance modes in upright split ring resonators **2016**, 1146-1147		1
44	Selective area grown AlInGaN nanowire arrays with core-shell structures for photovoltaics on silicon. *Nanoscale*, **2021**, 13, 8163-8173	7.7	1
43	Deciphering the Interaction of Single-Phase LaSrFeCrO with CO/CO Environments for Application in Reversible Solid Oxide Cells.. *ACS Applied Materials & Interfaces*, **2022**,	9.5	1
42	Morphology alteration of nickel microstructures for glycerol electrooxidation. *Journal of Catalysis*, **2021**, 404, 348-361	7.3	0
41	EELSpecNet: Deep Convolutional Neural Network Solution for Electron Energy Loss Spectroscopy Deconvolution. *Microscopy and Microanalysis*, **2021**, 27, 1626-1627	0.5	0
40	The effects of bending on plasmonic modes in nanowires and planar structures. *Nanophotonics*, **2022**, 11, 305-314	6.3	0
39	Investigation of pristine Li1.2Ni0.13Mn0.56Co0.13O2 by advanced TEM **2016**, 864-865		
38	Quantifying the hole distribution in cuprates: Atomic-resolution near-edge fine-structures of the superconductor Sr3Ca11Cu24O41 **2016**, 970-971		
37	Can transverse plasmonic fields be revealed by differential phase contrast? **2016**, 1154-1156		
36	Absorption-induced enhancement of X-ray contrast by soft X-ray emissions **2016**, 821-822		
35	Understanding the degradation of Pt nanoparticles in a fuel cell electrode via identical location electron tomography **2016**, 31-32		
34	Multivariate-aided mapping of solute partitioning in a rare-earth magnesium alloy **2016**, 49-50		

33	Strong Phonon-Plasmon Coupling Between Nanoscale Antennas. *Microscopy and Microanalysis*, **2020**, 26, 1498-1500	0.5
32	Correlative Nanoscale Luminescence and Elemental Mapping in InGaN/(Al)GaN Dot-in-a-wire Heterostructures **2016**, 815-816	
31	High energy-resolution EELS of ferroelectric and paraelectric BaTiO3 phases **2016**, 935-936	
30	Carrier Localization at Atomic-Scale Compositional Fluctuations in Single AlGaN Nanowires with Nano-Cathodoluminescence **2016**, 624-625	
29	Understanding the Chemical and Relevant Phase Evolutions of Lithium-Based Electrode Materials Using Atomic-Resolution Electron Energy Loss Spectroscopy. *Microscopy and Microanalysis*, **2018**, 24, 1520-1521	0.5
28	Atomic-resolution Imaging and Spectroscopy of Iron Oxide Epitaxial Thin Films. *Microscopy and Microanalysis*, **2018**, 24, 1614-1615	0.5
27	Surface Plasmon Resonance Mode Behaviour in Sierpinski Fractal Triangles and New Plasmonic Materials. *Microscopy and Microanalysis*, **2019**, 25, 636-637	0.5
26	Large Field of View Strain Characterization in a Scanning Transmission Electron Microscope Using a Designed Coherent Sampler. *Microscopy and Microanalysis*, **2019**, 25, 86-87	0.5
25	The in situ Studies on the Anomalous Domain Switching Caused by Trace Amount of Oxygen Vacancies. *Microscopy and Microanalysis*, **2019**, 25, 1888-1889	0.5
24	Response to: on the first application of the Richardson-Lucy algorithm to resolve plasmonic resonances in EELS spectra obtained with a monochromated electron beam. *Microscopy and Microanalysis*, **2014**, 20, 995	0.5
23	Aberration corrected STEM-EELS study of the hole distribution in cuprate superconductors. *Microscopy and Microanalysis*, **2015**, 21, 665-666	0.5
22	Surface Segregation of Fe in PtFe Alloy Nanoparticles: Its Precedence and Effect on the Ordered-Phase Evolution during Thermal Annealing. *ChemCatChem*, **2015**, 7, 3597-3597	5.2
21	Thermally Driven Cation Exchange at Solid State between Cu2Se and CdSe Nanocrystals: an In-Situ TEM Study. *Microscopy and Microanalysis*, **2015**, 21, 947-948	0.5
20	In-situ Transmission Electron Microscopy to Probe the Electrochemical Deposition of Nanostructured Materials. *Microscopy and Microanalysis*, **2015**, 21, 797-798	0.5
19	Atomic Resolution Imaging and Spectroscopy of Pt-alloy Electrocatalytic Nanoparticles. *Microscopy and Microanalysis*, **2015**, 21, 2247-2248	0.5
18	Advances in Electron Energy-Loss Spectroscopy with High Spatial and Energy Resolution. *Microscopy and Microanalysis*, **2014**, 20, 2176-2177	0.5
17	Contributions of Microscopy to Advanced Industrial Materials and Processing. *Microscopy and Microanalysis*, **2002**, 8, 188-189	0.5
16	ELNES and EDS Mapping in HfOxNy Thin Films and AlN/TiN Superlattices. *Microscopy and Microanalysis*, **2004**, 10, 308-309	0.5

List of Publications

15	Transmission Electron Microscopy Studies of 5-cycled Na Alanate with Ti Based Additive. *Materials Research Society Symposia Proceedings*, **2005**, 884, 1	
14	The Effect of Local Symmetry on Atomic Resolution EELS Near-Edge Structures: Predictions for Grain Boundaries In NiAl. *Microscopy and Microanalysis*, **2000**, 6, 186-187	0.5
13	Characterization of Phase Transformation by Fe-SEM and Fe-TEM Analysis. *Microscopy and Microanalysis*, **2001**, 7, 490-491	0.5
12	Using EELS fine structures: understanding the chemical bond and obtaining spectroscopic images. *Biology of the Cell*, **1999**, 91, 272-272	3.5
11	Eels Studies of B2-Type Transition Metal Aluminides: Experiment and Theory. *Materials Research Society Symposia Proceedings*, **1995**, 408, 567	
10	Crystal lattice image reconstruction from Moir□sampling scanning transmission electron microscopy. *Ultramicroscopy*, **2021**, 233, 113426	3.1
9	R□ktitelbild: Ternary Sn-Ti-O Electrocatalyst Boosts the Stability and Energy Efficiency of CO2 Reduction (Angew. Chem. 31/2020). *Angewandte Chemie*, **2020**, 132, 13224-13224	3.6
8	Comparison Between Moir□Sampling Scanning Transmission Electron Microscopy Geometrical Phase Analysis Strain Characterization Method and Dark-Field Electron Holography. *Microscopy and Microanalysis*, **2021**, 27, 1982-1984	0.5
7	Some applications of analytical electron microscopy and high-resolution spectroscopy in the study of functional materials **2016**, 911-912	
6	High resolution STEM and EELS investigation of N-doped carbon allotropes decorated with noble metal atom catalysts **2016**, 806-807	
5	Atomic-Scale Compositional Fluctuations in Ternary III-Nitride Nanowires **2016**, 550-551	
4	Advantages of Direct Detection and Electron Counting for High-Energy Resolution and Monochromated Electron Energy Loss Spectroscopy Data Acquisition. *Microscopy and Microanalysis*, **2018**, 24, 474-475	0.5
3	Crystal Lattices Reconstruction from Moir□Aliased Scanning Transmission Electron Microscopy Electron Micrograph. *Microscopy and Microanalysis*, **2021**, 27, 1986-1988	0.5
2	Near-Infrared Cathodoluminescence Polarimetry of a Plasmonic Vertical Split Ring Resonator. *Microscopy and Microanalysis*, **2021**, 27, 706-708	0.5
1	Electron ptychography dose reduction using Moir□sampling on periodic structures. *Ultramicroscopy*, **2022**, 239, 113559	3.1