

David W Mccomb

List of Publications by Year in Descending Order

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

114 papers	1,321 citations	20 h-index	35 g-index
118 ext. papers	1,734 ext. citations	3.9 avg, IF	4.53 L-index

#	Paper	IF	Citations
114	Designer Extracellular Vesicles Modulate Pro-Neuronal Cell Responses and Improve Intracranial Retention.. <i>Advanced Healthcare Materials</i> , 2022 , e2100805	10.1	2
113	Extracting weak magnetic contrast from complex background contrast in plan-view FeGe thin films. <i>Ultramicroscopy</i> , 2022 , 232, 113395	3.1	0
112	Biomimetic nanoparticles deliver mRNAs encoding costimulatory receptors and enhance T cell mediated cancer immunotherapy.. <i>Nature Communications</i> , 2021 , 12, 7264	17.4	9
111	MMP20-generated amelogenin cleavage products prevent formation of fan-shaped enamel malformations. <i>Scientific Reports</i> , 2021 , 11, 10570	4.9	1
110	Microcrystal electron diffraction of the peptide Gramicidin D. <i>Microscopy and Microanalysis</i> , 2021 , 27, 1522-1523	0.5	
109	In-situ observation of the in-plane field induced nucleation of skyrmion using Lorentz-TEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 380-381	0.5	
108	On the shape and structure of the murine pulmonary heart valve. <i>Scientific Reports</i> , 2021 , 11, 14078	4.9	
107	Vibrational Spectroscopy of Beam-Sensitive Materials in the Transmission Electron Microscope. <i>Microscopy and Microanalysis</i> , 2021 , 27, 592-594	0.5	
106	Lorentz Transmission Electron Microscopy Imaging of Magnetic Textures in MnBi. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2178-2179	0.5	
105	Direct imaging of skyrmion in plan-view of a polycrystalline FeGe thin film. <i>Microscopy and Microanalysis</i> , 2021 , 27, 232-233	0.5	0
104	Stimulated Nucleation of Skyrmions in a Centrosymmetric Magnet. <i>ACS Nano</i> , 2021 ,	16.7	2
103	Construction of Messenger RNA (mRNA) Probes Delivered By Lipid Nanoparticles to Visualize Intracellular Protein Expression and Localization at Organelles. <i>Advanced Materials</i> , 2021 , 33, e2103131	24	3
102	Investigation of Antiphase Domain Boundaries in Cobalt Ferrite Thin Films via High Resolution Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2020 , 26, 972-974	0.5	1
101	Spatial Frequency Selection in Lorentz 4D-Scanning Transmission Electron Microscopy Reconstruction. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1902-1905	0.5	1
100	Investigation of the Role of Rare-Earth Elements in Spin-Hall Topological Hall Effect in Pt/Ferrimagnetic-Garnet Bilayers. <i>Nano Letters</i> , 2020 , 20, 4667-4672	11.5	9
99	Probing the Source of the Interfacial Dzyaloshinskii-Moriya Interaction Responsible for the Topological Hall Effect in Metal/Tm ₃ Fe ₅ O ₁₂ Systems. <i>Physical Review Letters</i> , 2020 , 124, 107201	7.4	24
98	Novel Bacterial Diversity and Fragmented eDNA Identified in Hyperbiofilm-Forming <i>Pseudomonas aeruginosa</i> Rugose Small Colony Variant. <i>IScience</i> , 2020 , 23, 100827	6.1	14

97	Interface-induced ferromagnetism in $\text{Fe}_2\text{O}_3/\text{Ga}_2\text{O}_3$ superlattices. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020 , 38, 063413	2.9	1
96	Vitamin lipid nanoparticles enable adoptive macrophage transfer for the treatment of multidrug-resistant bacterial sepsis. <i>Nature Nanotechnology</i> , 2020 , 15, 41-46	28.7	79
95	Functionalized lipid-like nanoparticles for in vivo mRNA delivery and base editing. <i>Science Advances</i> , 2020 , 6,	14.3	38
94	Characterization of Sub-Bandgap Plasmon Excitations in Transparent Conducting Oxides with Electron Energy-Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2019 , 25, 600-601	0.5	
93	Imaging and analysis of low atomic number materials in the STEM. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1734-1735	0.5	
92	Chemotherapy drugs derived nanoparticles encapsulating mRNA encoding tumor suppressor proteins to treat triple-negative breast cancer. <i>Nano Research</i> , 2019 , 12, 855-861	10	22
91	Manipulating acoustic and plasmonic modes in gold nanostars. <i>Nanoscale Advances</i> , 2019 , 1, 2690-2698	5.1	4
90	Epitaxial $\text{Co}_{50}\text{Fe}_{50}(110)/\text{Pt}(111)$ films on $\text{MgAl}_2\text{O}_4(001)$ and its enhancement of perpendicular magnetic anisotropy. <i>Journal of Applied Physics</i> , 2019 , 125, 183903	2.5	4
89	Observation of Nanoscale Skyrmions in $\text{SrIrO}_3/\text{SrRuO}_3$ Bilayers. <i>Nano Letters</i> , 2019 , 19, 3169-3175	11.5	76
88	The Effect of Nonuniform Pixel Responses in CCD on Quantitative Analysis. <i>Microscopy and Microanalysis</i> , 2019 , 25, 230-231	0.5	
87	Identification of turbostratic twisting in germanane. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 10092-10097	0.5	3
86	An Electron Microscopy Collaboratory for Correlative Imaging Sciences. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2294-2295	0.5	0
85	Direct Nanoscale Characterization of Deep Levels in AgCuInGaSe_2 Using Electron Energy-Loss Spectroscopy in the Scanning Transmission Electron Microscope. <i>Advanced Energy Materials</i> , 2019 , 9, 1901612	21.8	9
84	Decomposition-Induced Room-Temperature Magnetism of the Na-Intercalated Layered Ferromagnet FeGeTe . <i>Nano Letters</i> , 2019 , 19, 5031-5035	11.5	24
83	Ferromagnetic Epitaxial Fe_2O_3 on Ga_2O_3 : A New Monoclinic Form of Fe_2O_3 . <i>Crystal Growth and Design</i> , 2019 , 19, 4205-4211	3.5	4
82	Enhanced uniformity of III-nitride nanowire arrays on bulk metallic glass and nanocrystalline substrates. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2019 , 37, 031212	1.3	5
81	Investigation of Spin Manipulation in $\text{Pt}/\text{CoFe}_2\text{O}_4$ via Scanning Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2019 , 25, 958-959	0.5	
80	A Correlative Imaging Approach for Extracellular Matrix Characterization in Mice. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1134-1135	0.5	

79	Nanoscale Quantification of Jahn-Teller Distortion in LaMnO ₃ . <i>Microscopy and Microanalysis</i> , 2019 , 25, 80-81	0.5	
78	Anomalous Hall effect in noncollinear antiferromagnetic Mn ₃ NiN thin films. <i>Physical Review Materials</i> , 2019 , 3,	3.2	22
77	Quantifying Jahn-Teller distortion at the nanoscale with picometer accuracy using position averaged convergent beam electron diffraction. <i>Physical Review Research</i> , 2019 , 1,	3.9	1
76	Antibiotic-Derived Lipid Nanoparticles to Treat Intracellular. <i>ACS Applied Bio Materials</i> , 2019 , 2, 1270-1277	4.1	16
75	Cryo-electron microscopy instrumentation and techniques for life sciences and materials science. <i>MRS Bulletin</i> , 2019 , 44, 929-934	3.2	3
74	Nanoanalytical electron microscopy of events predisposing to mineralisation of turkey tendon. <i>Scientific Reports</i> , 2018 , 8, 3024	4.9	5
73	Nano-Cathodoluminescence Measurement of Asymmetric Carrier Trapping and Radiative Recombination in GaN and InGaN Quantum Disks. <i>Microscopy and Microanalysis</i> , 2018 , 24, 93-98	0.5	6
72	Room Temperature Intrinsic Ferromagnetism in Epitaxial Manganese Selenide Films in the Monolayer Limit. <i>Nano Letters</i> , 2018 , 18, 3125-3131	11.5	353
71	Bandgap profiling in CIGS solar cells via valence electron energy-loss spectroscopy. <i>Journal of Applied Physics</i> , 2018 , 123, 115703	2.5	6
70	Identification of Ge vacancies as electronic defects in methyl- and hydrogen-terminated germanane. <i>Applied Physics Letters</i> , 2018 , 113, 061110	3.4	5
69	Characterization of Sub-Bandgap Energy States in CuIn _x Ga(1-x)Se ₂ and Transparent Conducting Oxides with Electron Energy-Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2018 , 24, 456-457	0.5	
68	Magnetic proximity effect in Pt/CoFe ₂ O ₄ bilayers. <i>Physical Review Materials</i> , 2018 , 2,	3.2	23
67	Chiral bobbbers and skyrmions in epitaxial FeGe/Si(111) films. <i>Physical Review Materials</i> , 2018 , 2,	3.2	34
66	Workflow for Correlatively Imaging Mouse Pulmonary Valve Extracellular Matrix. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1436-1437	0.5	
65	High Resolution Scanning Transmission Electron Microscopy of Normal and Inverse Spinel Regions in Epitaxially Grown CoFe ₂ O ₄ . <i>Microscopy and Microanalysis</i> , 2018 , 24, 70-71	0.5	
64	STEM Observation of eDNA as a Dominant Component of EPS in Pseudomonas aeruginosa Biofilm. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1334-1335	0.5	1
63	Monochromated Electron Energy-Loss Spectroscopy of Interfaces in Beam Sensitive Materials. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1986-1987	0.5	
62	Heterodimeric Plasmonic Nanogaps for Biosensing. <i>Micromachines</i> , 2018 , 9,	3.3	2

61	Multimodal Evidence of Mesostructured Calcium Fatty Acid Deposits in Human Hair and Their Role on Hair Properties.. <i>ACS Applied Bio Materials</i> , 2018 , 1, 1174-1183	4.1	1
60	Remote Operation: The Future of Education and Research in Electron Microscopy. <i>Microscopy Today</i> , 2018 , 26, 26-33	0.4	4
59	Co-delivery of mRNA and SPIONs through amino-ester nanomaterials. <i>Nano Research</i> , 2018 , 11, 5596-5603	0.3	4
58	Room-Temperature Routes Toward the Creation of Zinc Oxide Films from Molecular Precursors. <i>ACS Omega</i> , 2017 , 2, 98-104	3.9	2
57	Measuring optical properties of individual SnO ₂ nanowires via valence electron energy-loss spectroscopy. <i>Journal of Materials Research</i> , 2017 , 32, 2479-2486	2.5	4
56	High-resolution monochromated electron energy-loss spectroscopy of organic photovoltaic materials. <i>Ultramicroscopy</i> , 2017 , 180, 125-132	3.1	7
55	Correlative Imaging of Murine Pulmonary Valve Extracellular Matrix. <i>Microscopy and Microanalysis</i> , 2017 , 23, 358-359	0.5	
54	Correlative 3D Imaging and Characterization of Human Dentine. <i>Microscopy and Microanalysis</i> , 2017 , 23, 330-331	0.5	1
53	Metallic ferromagnetic films with magnetic damping under 1.4 T. <i>Nature Communications</i> , 2017 , 8, 234	17.4	57
52	Monochromated Electron Energy-Loss Spectroscopy of Lead-Free Halide Perovskite Semiconductors. <i>Microscopy and Microanalysis</i> , 2017 , 23, 2098-2099	0.5	
51	Electron Microscopy Reveals Structural and Chemical Changes at the Nanometer Scale in the Pathology. <i>ACS Biomaterials Science and Engineering</i> , 2017 , 3, 2788-2797	5.5	7
50	Cell interactions in Wound Biofilm and in vitro Biofilm Revealed by Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1286-1287	0.5	
49	Detecting Sub Bandgap Energies in CIGS with Electron Energy-Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1546-1547	0.5	
48	Electron Diffraction of Germanane. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1744-1745	0.5	1
47	Determining Optical Absorption Coefficients in Beam Sensitive Materials using Monochromated Electron Energy-Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2017 , 23, 1810-1811	0.5	
46	h Factor and k-Factor Determination Using Needle Samples. <i>Microscopy and Microanalysis</i> , 2017 , 23, 506-507	0.5	
45	Thickness dependence of spin Hall angle of Au grown on Y ₃ Fe ₅ O ₁₂ epitaxial films. <i>Physical Review B</i> , 2016 , 94,	3.3	26
44	Measurement of optical properties in organic photovoltaic materials using monochromated electron energy-loss spectroscopy. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 13636-13645	13	12

43	Effects of local structural transformation of lipid-like compounds on delivery of messenger RNA. <i>Scientific Reports</i> , 2016 , 6, 22137	4.9	32
42	Structural, chemical and strain features of misfit dislocation cores in ultrathin La _{0.7} Sr _{0.3} MnO ₃ epitaxial films deposited on LaAlO ₃ 2016 , 1030-1031		
41	Correlative Microscopy Application in Spinal Cord Injury Research. <i>Microscopy and Microanalysis</i> , 2016 , 22, 204-205	0.5	
40	Accessing High Spatial Resolution Low-Loss EELS Information without Cerenkov Radiation. <i>Microscopy and Microanalysis</i> , 2016 , 22, 976-977	0.5	1
39	Advancement of Heteroepitaxial III-V/Si Thin Films through Defect Characterization. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1538-1539	0.5	
38	Novel Investigative Preparation of Human Hair. <i>Microscopy and Microanalysis</i> , 2016 , 22, 188-189	0.5	
37	Ferritin Mineral Core Composition in Health and Disease. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1156-1157		
36	Electronic Structure Analysis Of Aged Commercial LiFePO ₄ Battery Cathodes Using Low Loss Electron Energy Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1330-1331	0.5	
35	Mapping Trends in Electronic Structure Variation With Aging in LiFePO ₄ Cathodes: A Lorentz Oscillator Model Approach. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1354-1355	0.5	
34	Initial Results From a CdTe High-Energy X-ray Detector on a TEM. <i>Microscopy and Microanalysis</i> , 2016 , 22, 312-313	0.5	
33	Characterizing Atomic Ordering in Intermetallic Compounds Using X-ray Energy Dispersive Spectroscopy in an Aberration-Corrected (S)TEM. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1266-1267	0.5	
32	Composition of Epitaxial ZrO ₂ :Y ₂ O ₃ /SrTiO ₃ Heterostructures. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1356-1357	0.5	
31	Monochromated Electron Energy-Loss Spectroscopy of Organic Photovoltaics. <i>Microscopy and Microanalysis</i> , 2016 , 22, 958-959	0.5	
30	Observation of spin Seebeck contribution to the transverse thermopower in Ni-Pt and MnBi-Au bulk nanocomposites. <i>Nature Communications</i> , 2016 , 7, 13714	17.4	27
29	Practical Considerations for High-Resolution Transmission Kikuchi Diffraction Mapping and Analysis in Titanium Alloys. <i>Microscopy and Microanalysis</i> , 2016 , 22, 636-637	0.5	1
28	Optimized Damage-Reduction 60 keV Monochromated Electron Energy-Loss Spectroscopy Measurements of Optical Properties at the Donor/Acceptor Interface in Organic Photovoltaic Devices. <i>Microscopy and Microanalysis</i> , 2016 , 22, 984-985	0.5	
27	Probing the electronic structure at the heterovalent GaP/Si interface using electron energy-loss spectroscopy 2016 ,		1
26	Regional variation of bone tissue properties at the human mandibular condyle. <i>Bone</i> , 2015 , 77, 98-106	4.7	22

25	Applications of Electron Channeling Contrast Imaging for the Rapid Characterization of Extended Defects in III/V/Si Heterostructures. <i>IEEE Journal of Photovoltaics</i> , 2015 , 5, 676-682	3.7	31
24	Probing carbonate in bone forming minerals on the nanometre scale. <i>Acta Biomaterialia</i> , 2015 , 20, 129-139	0.8	22
23	Characterizing Atomic Ordering of High Entropy Alloys Using Super-X EDS Characterization. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1225-1226	0.5	
22	FIB/SEM Tomography of Wound Biofilm. <i>Microscopy and Microanalysis</i> , 2015 , 21, 205-206	0.5	1
21	Super-X EDS Characterization of Chemical Segregation within a Superlattice Extrinsic Stacking Fault of a Ni- based Superalloy. <i>Microscopy and Microanalysis</i> , 2015 , 21, 493-494	0.5	1
20	Correlative STEM-Cathodoluminescence and Low-Loss EELS of Semiconducting Oxide Nano-Heterostructures for Resistive Gas-Sensing Applications. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1255-1256	0.5	1
19	Semiconductor Nanowire Light-Emitting Diodes Grown on Metal: A Direction Toward Large-Scale Fabrication of Nanowire Devices. <i>Small</i> , 2015 , 11, 5402-8	11	84
18	Probing Bonding Environments in Osmium-Based Double Perovskites Using Monochromated Dual Electron-Energy Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2365-2366	0.5	
17	Variable Angle Spectroscopic Ellipsometry and Electron Energy-Loss Spectroscopy. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1471-1472	0.5	
16	Characterization of Stannous Fluoride Uptake in Human Dentine by Super-X XEDS and Dual-EELS analysis. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1231-1232	0.5	1
15	Electron Energy-Loss Spectroscopy of Organic Photovoltaics. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1467-1468	0.5	
14	Novel Applications of Electron Channeling Contrast Imaging. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1897-1898	0.5	
13	Site-Specific TEM Specimen Preparation of Samples with Sub-Surface Features. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2157-2158	0.5	1
12	Considerations for Physical Facility Design and Management of a State-of-the-Art Electron Microscopy and Analysis Laboratory. <i>Microscopy and Microanalysis</i> , 2015 , 21, 525-526	0.5	
11	EELS Investigations of Aging Mechanisms in LiFePO ₄ Cathodes Resulting From Prolonged Electrochemical Cycling. <i>Microscopy and Microanalysis</i> , 2015 , 21, 323-324	0.5	
10	An Orthogonal Array Optimization of Lipid-like Nanoparticles for mRNA Delivery in Vivo. <i>Nano Letters</i> , 2015 , 15, 8099-107	11.5	122
9	Towards quantitative electrostatic potential mapping of working semiconductor devices using off-axis electron holography. <i>Ultramicroscopy</i> , 2015 , 152, 10-20	3.1	23
8	Understanding B-Site Disorder in HAADF-STEM Images of Double Perovskite Thin Films Using the Quantum Excitation of Phonons Model. <i>Microscopy and Microanalysis</i> , 2014 , 20, 184-185	0.5	

7	Monochromated Electron Energy-Loss Spectroscopy Spectrum Imaging of Organic Photovoltaic Devices. <i>Microscopy and Microanalysis</i> , 2014 , 20, 400-401	0.5	
6	Investigation of the Use of Stereo-Pair Data Sets in Electron Tomography Characterization of Organic-Based Solar Cells. <i>Microscopy and Microanalysis</i> , 2014 , 20, 550-551	0.5	
5	Using Electron Channeling Contrast Imaging for Misfit Dislocation Characterization in Heteroepitaxial III-V/Si Thin Films. <i>Microscopy and Microanalysis</i> , 2014 , 20, 552-553	0.5	
4	Electron Energy Loss Spectroscopy and Localized Cathodoluminescence Characterization of GaN Quantum Discs. <i>Microscopy and Microanalysis</i> , 2014 , 20, 578-579	0.5	1
3	Performance of an Improved TEM SDD Detector. <i>Microscopy and Microanalysis</i> , 2014 , 20, 608-609	0.5	
2	3D Visualization of Motor-Neurons in Mice Spinal Cord Using FIBSEM Tomography. <i>Microscopy and Microanalysis</i> , 2014 , 20, 1400-1401	0.5	1
1	STO/BTO Modulated Superlattice Multilayer Structures with Atomically Sharp Interfaces. <i>Advanced Materials Interfaces</i> , 2014 , 1, 1300116	4.6	5