Christopher F Mcconville

List of Publications by Year
in descending order

116 papers	6,281 citations	38742 50 h-index	76900 74 g-index
116 all docs	116 docs citations	116 times ranked	6153 citing authors

#	Article	IF	Citations
1	The Impact of Water on the Lateral Nanostructure of a Deep Eutectic Solventâ€“Solid Interface. Australian Journal of Chemistry, 2022, 75, 111-125.	0.9	7
2	Bulk and interfacial nanostructure and properties in deep eutectic solvents: Current perspectives and future directions. Journal of Colloid and Interface Science, 2022, 608, 2430-2454.	9.4	45
3	Highly accurate and label-free discrimination of single cancer cell using a plasmonic oxide-based nanoprobe. Biosensors and Bioelectronics, 2022, 198, 113814.	10.1	14
4	Direct conversion of CO₂ to solid carbon by Ga-based liquid metals. Energy and Environmental Science, 2022, 15, 595-600.	30.8	45
5	Interactions between Liquid Metal Droplets and Bacterial, Fungal, and Mammalian Cells. Advanced Materials Interfaces, 2022, 9, .	3.7	19
6	Liquid metals: an ideal platform for the synthesis of two-dimensional materials. Chemical Society Reviews, 2022, 51, 1253-1276.	38.1	45
7	Oscillatory bifurcation patterns initiated by seeded surface solidification of liquid metals. , 2022, 1, 158-169.		15
8	Highly Conductive and Visibly Transparent p-Type CuCrO₂ Films by Ultrasonic Spray Pyrolysis. ACS Applied Materials & Interfaces, 2022, 14, 11768-11778.	8.0	11
9	Large Area Ultrathin InN and Tin Doped InN Nanosheets Featuring 2D Electron Gases. ACS Nano, 2022, 16, 5476-5486.	14.6	8
10	Electrochemical Stability of Zinc and Copper Surfaces in Protic Ionic Liquids. Langmuir, 2022, 38, 4633-4644.	3.5	4
11	Low-temperature liquid platinum catalyst. Nature Chemistry, 2022, 14, 935-941.	13.6	61
12	Atomically Thin Antimonyâ€Doped Indium Oxide Nanosheets for Optoelectronics. Advanced Optical Materials, 2022, 10, .	7.3	12
13	Unique surface patterns emerging during solidification of liquid metal alloys. Nature Nanotechnology, 2021, 16, 431-439.	31.5	104
14	Ultrathin oxysulfide semiconductors from liquid metal: a wet chemical approach. Journal of Materials Chemistry C, 2021, 9, 11815-11826.	5.5	19
15	Low dimensional materials for glucose sensing. Nanoscale, 2021, 13, 11017-11040.	5.6	30
16	Programmable Phototaxis of Metalâ€“Phenolic Particle Microswimmers. Advanced Materials, 2021, 33, e2006177.	21.0	16
17	High-mobility p-type semiconducting two-dimensional Î²-TeO2. Nature Electronics, 2021, 4, 277-283.	26.0	75
18	Broad-Spectrum Solvent-free Layered Black Phosphorus as a Rapid Action Antimicrobial. ACS Applied Materials & Interfaces, 2021, 13, 17340-17352.	8.0	24

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19	Maximum piezoelectricity in a few unit-cell thick planar ZnO â€“ A liquid metal-based synthesis approach. Materials Today, 2021, 44, 69-77.	14.2	44
20	A Visibleâ€Blind Photodetector and Artificial Optoelectronic Synapse Using Liquidâ€Metal Exfoliated ZnO Nanosheets. Advanced Optical Materials, 2021, 9, 2100449.	7.3	41
21	Antipathogenic properties and applications of low-dimensional materials. Nature Communications, 2021, 12, 3897.	12.8	63
22	Nanostructure of a deep eutectic solvent at solid interfaces. Journal of Colloid and Interface Science, 2021, 591, 38-51.	9.4	27
23	Systematic Comparison of the Structural and Dynamic Properties of Commonly Used Water Models for Molecular Dynamics Simulations. Journal of Chemical Information and Modeling, 2021, 61, 4521-4536.	5.4	94
24	Doping Process of 2D Materials Based on the Selective Migration of Dopants to the Interface of Liquid Metals. Advanced Materials, 2021, 33, e2104793.	21.0	38
25	SILAR deposition of bismuth vanadate photoanodes for photoelectrochemical water splitting. Journal of Materials Chemistry A, 2021, 9, 25641-25650.	10.3	5
26	Antibacterial Liquid Metals: Biofilm Treatment <i>via</i> Magnetic Activation. ACS Nano, 2020, 14, 802-817.	14.6	198
27	Ordered-vacancy-enabled indium sulphide printed in wafer-scale with enhanced electron mobility. Materials Horizons, 2020, 7, 827-834.	12.2	27
28	Broad-spectrum treatment of bacterial biofilms using magneto-responsive liquid metal particles. Journal of Materials Chemistry B, 2020, 8, 10776-10787.	5.8	31
29	Twoâ€Step Synthesis of Largeâ€Area 2D Bi₂S₃ Nanosheets Featuring High Inâ€Plane Anisotropy. Advanced Materials Interfaces, 2020, 7, 2001131.	3.7	27
30	Conformationally tuned antibacterial oligomers target the peptidoglycan of Gram-positive bacteria. Journal of Colloid and Interface Science, 2020, 580, 850-862.	9.4	24
31	Liquid Metals in Catalysis for Energy Applications. Joule, 2020, 4, 2290-2321.	24.0	106
32	Ultrasonic Spray Pyrolysis of Antimonyâ€Doped Tin Oxide Transparent Conductive Coatings. Advanced Materials Interfaces, 2020, 7, 2000655.	3.7	20
33	Liquidâ€Metal Synthesized Ultrathin SnS Layers for Highâ€Performance Broadband Photodetectors. Advanced Materials, 2020, 32, e2004247.	21.0	66
34	Temperature-Dependent Electrical Properties of Graphitic Carbon Schottky Contacts to <i>Î²</i>-Gaâ‚‚Oâ‚ƒ. IEEE Transactions on Electron Devices, 2020, 67, 5669-5675.	3.0	5
35	Electroformed, Selfâ€Connected Tin Oxide Nanoparticle Networks for Electronic Reservoir Computing. Advanced Electronic Materials, 2020, 6, 2000081.	5.1	10
36	Cobalt-Directed Assembly of Antibodies onto Metalâ€“Phenolic Networks for Enhanced Particle Targeting. Nano Letters, 2020, 20, 2660-2666.	9.1	39

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37	Significant Enhancement of Antimicrobial Activity in Oxygen-Deficient Zinc Oxide Nanowires. ACS Applied Bio Materials, 2020, 3, 2997-3004.	4.6	36
38	Flexible two-dimensional indium tin oxide fabricated using a liquid metal printing technique. Nature Electronics, 2020, 3, 51-58.	26.0	161
39	Proliferation of Faulty Materials Data Analysis in the Literature. Microscopy and Microanalysis, 2020, 26, 1-2.	0.4	59
40	Antibacterial Properties of Graphene Oxideâ€“Copper Oxide Nanoparticle Nanocomposites. ACS Applied Bio Materials, 2019, 2, 5687-5696.	4.6	57
41	Identification of Lone-Pair Surface States on Indium Oxide. Journal of Physical Chemistry C, 2019, 123, 1700-1709.	3.1	20
42	Wafer-Sized Ultrathin Gallium and Indium Nitride Nanosheets through the Ammonolysis of Liquid Metal Derived Oxides. Journal of the American Chemical Society, 2019, 141, 104-108.	13.7	107
43	Cobalt Phosphate Nanostructures for Non-Enzymatic Glucose Sensing at Physiological pH. ACS Applied Materials & Interfaces, 2018, 10, 42786-42795.	8.0	64
44	Green Synthesis of Lowâ€Dimensional Aluminum Oxide Hydroxide and Oxide Using Liquid Metal Reaction Media: Ultrahigh Flux Membranes. Advanced Functional Materials, 2018, 28, 1804057.	14.9	67
45	Printing two-dimensional gallium phosphate out of liquid metal. Nature Communications, 2018, 9, 3618.	12.8	107
46	Electromagnetic Functionalization of Wideâ€Bandgap Dielectric Oxides by Boron Interstitial Doping. Advanced Materials, 2018, 30, e1802025.	21.0	5
47	Heteroepitaxial Beta-Ga₂O₃on 4H-SiC for an FET With Reduced Self Heating. IEEE Journal of the Electron Devices Society, 2017, 5, 256-261.	2.1	55
48	Effects of Ni <i>d</i>-levels on the electronic band structure of NixCd1-xO semiconducting alloys. Journal of Applied Physics, 2017, 122, .	2.5	9
49	Surface passivation of semiconducting oxides by self-assembled nanoparticles. Scientific Reports, 2016, 6, 18449.	3.3	12
50	Recrystallization of Highly-Mismatched BexZn1â€“xO Alloys: Formation of a Degenerate Interface. ACS Applied Materials & Interfaces, 2014, 6, 18758-18768.	8.0	3
51	High voltage hybrid organic photovoltaics using a zinc oxide acceptor and a subphthalocyanine donor. Physical Chemistry Chemical Physics, 2014, 16, 18926-18932.	2.8	17
52	Pinning effect on the band gap modulation of crystalline BexZn1â^'xO alloy films grown on Al2O3(0001). CrystEngComm, 2014, 16, 2136-2143.	2.6	6
53	Organic photovoltaic cells utilising ZnO electron extraction layers produced through thermal conversion of ZnSe. Journal of Materials Chemistry A, 2014, 2, 19201-19207.	10.3	17
54	Heteroepitaxial Growth of Ferromagnetic MnSb(0001) Films on Ge/Si(111) Virtual Substrates. Crystal Growth and Design, 2013, 13, 4923-4929.	3.0	21

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55	Optimization of a High Work Function Solution Processed Vanadium Oxide Hole-Extracting Layer for Small Molecule and Polymer Organic Photovoltaic Cells. Journal of Physical Chemistry C, 2013, 117, 49-57.	3.1	64
56	MBE growth and characterization of Mn-doped InN. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, .	1.2	5
57	Polarity effects in the x-ray photoemission of ZnO and other wurtzite semiconductors. Applied Physics Letters, 2011, 98, .	3.3	64
58	Thickness dependence of the strain, band gap and transport properties of epitaxial In₂O₃thin films grown on Y-stabilised ZrO₂(111). Journal of Physics Condensed Matter, 2011, 23, 334211.	1.8	45
59	Surface Band-Gap Narrowing in Quantized Electron Accumulation Layers. Physical Review Letters, 2010, 104, 256803.	7.8	86
60	Comment on â€œComputer Simulation of Coaxial Impact-Collision Ion Scattering Spectroscopy Spectra of Clean Pt(111) Surface and Pt(111)â€“p(2Ã—2)-O Surfaceâ€. Japanese Journal of Applied Physics, 2009, 48, 099101.	1.5	1
61	Unintentional conductivity of indium nitride: transport modelling and microscopic origins. Journal of Physics Condensed Matter, 2009, 21, 174201.	1.8	36
62	Surface Structure and Electronic Properties of In₂O₃(111) Single-Crystal Thin Films Grown on Y-Stabilized ZrO₂(111). Chemistry of Materials, 2009, 21, 4353-4355.	6.7	54
63	The influence of conduction band plasmons on core-level photoemission spectra of InN. Surface Science, 2008, 602, 871-875.	1.9	30
64	Band bending at the surfaces of In-rich InGaN alloys. Journal of Applied Physics, 2008, 104, .	2.5	33
65	Valence band offset of the ZnO/AlN heterojunction determined by x-ray photoemission spectroscopy. Applied Physics Letters, 2008, 93, .	3.3	78
66	Surface Electron Accumulation and the Charge Neutrality Level in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>In</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2008, 101, 116808.	7.8	236
67	Valence band offset of InNâˆ•AlN heterojunctions measured by x-ray photoelectron spectroscopy. Applied Physics Letters, 2007, 90, 132105.	3.3	89
68	Mechanisms in the Formation of High Quality Schottky Contacts to n-type ZnO. Materials Research Society Symposia Proceedings, 2007, 1035, 1.	0.1	1
69	Inversion and accumulation layers at InN surfaces. Journal of Crystal Growth, 2006, 288, 268-272.	1.5	37
70	Dilute antimonide nitrides for very long wavelength infrared applications. , 2006, 6206, 201.		14
71	Origin of the n-type conductivity of InN: The role of positively charged dislocations. Applied Physics Letters, 2006, 88, 252109.	3.3	138
72	Band anticrossing in GaNxSb1âˆ’x. Applied Physics Letters, 2006, 89, 111921.	3.3	55

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73	Quantized Electron Accumulation States in Indium Nitride Studied by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2006, 97, 237601.	7.8	103
74	Transition from electron accumulation to depletion at InGaN surfaces. Applied Physics Letters, 2006, 89, 202110.	3.3	85
75	Growth of dilute GaNSb by plasma-assisted MBE. Journal of Crystal Growth, 2005, 278, 188-192.	1.5	31
76	Photoluminescence spectroscopy of bandgap reduction in dilute InNAs alloys. Applied Physics Letters, 2005, 87, 182114.	3.3	52
77	Band gap reduction in GaNSb alloys due to the anion mismatch. Applied Physics Letters, 2005, 87, 132101.	3.3	49
78	Negative Band Gaps in DiluteInNxSb1â^'xAlloys. Physical Review Letters, 2004, 92, 136801.	7.8	58
79	Atomic hydrogen cleaning of GaAs(): a scanning tunnelling microscopy study. Surface Science, 2004, 548, L1-L6.	1.9	33
80	Reaction of atomic oxygen with a Pt() surface: chemical and structural determination using XPS, CAICISS and LEED. Surface Science, 2003, 545, 19-33.	1.9	210
81	Magnetic properties of praseodymium ions in Na2Oâ€"Pr2O3â€"SiO2 glasses. Journal of Magnetism and Magnetic Materials, 2003, 260, 60-69.	2.3	57
82	Poly(methylmethacrylate-dimethylsiloxane) triblock copolymers synthesized by transition metal mediated living radical polymerization: bulk and surface characterization. European Polymer Journal, 2003, 39, 5-13.	5.4	40
83	Passivation and reconstruction-dependent electron accumulation at sulphur treated InAs() surfaces. Surface Science, 2003, 523, 179-188.	1.9	28
84	Structural and magnetic properties of sodium iron germanate glasses. Journal of Non-Crystalline Solids, 2000, 272, 179-190.	3.1	31
85	The structure of sodium iron silicate glass â€" a multi-technique approach. Journal of Non-Crystalline Solids, 1999, 253, 192-202.	3.1	76
86	Atomic hydrogen cleaning of polar IIIâ€"V semiconductor surfaces. Surface Science, 1998, 401, 125-137.	1.9	72
87	Characterization of thiolate species formation on Cu(111) using soft x-ray photoelectron spectroscopy. Journal of Physics Condensed Matter, 1998, 10, 8661-8670.	1.8	45
88	Accumulation layer profiles at InAs polar surfaces. Applied Physics Letters, 1997, 71, 3688-3690.	3.3	52
89	Structural investigation of ordered Sb adsorption phases on Ag(111) using coaxial impact collision ion scattering spectroscopy. Surface Science, 1997, 372, 117-131.	1.9	31
90	Direct evidence for the step density model in the initial stages of the layer-by-layer homoepitaxial growth of GaAs(111)A. Surface Science, 1997, 370, L173-L178.	1.9	38

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91	Surface alloying at InAsî—¸GaAs interfaces grown on (001) surfaces by molecular beam epitaxy. Surface Science, 1997, 387, 213-226.	1.9	126
92	X-ray photoelectron spectroscopy study of copper sodium silicate glass surfaces. Journal of Non-Crystalline Solids, 1997, 215, 271-282.	3.1	42
93	XPS and magnetization studies of cobalt sodium silicate glasses. Journal of Non-Crystalline Solids, 1997, 220, 267-279.	3.1	50
94	Spatial distribution of In during the initial stages of growth of InAs on GaAs(001)-c(4 Ã— 4). Surface Science, 1996, 365, 735-742.	1.9	52
95	Plasmon excitations and accumulation layers in heavily doped InAs(001). Physical Review B, 1996, 54, 2654-2661.	3.2	43
96	An XPS study of iron sodium silicate glass surfaces. Journal of Non-Crystalline Solids, 1996, 208, 267-276.	3.1	171
97	Influence of surfactant coverage on epitaxial growth of Ge on Si(001). Physical Review B, 1996, 54, 8600-8604.	3.2	62
98	Surface reconstructions of InSb(100) observed by scanning tunneling microscopy. Physical Review B, 1994, 50, 14965-14976.	3.2	71
99	An STM study of the InSb(100)-c(8 Ã— 2) surface. Surface Science, 1993, 280, 63-70.	1.9	52
100	Low energy ion beam damage of semiconductor surfaces: a detailed study of InSb(100) using electron energy loss spectroscopy. Surface Science, 1991, 247, 1-12.	1.9	35
101	Iodine adsorption on InSb(001) at room temperature and low temperature: surface reaction. Journal of the Chemical Society, Faraday Transactions, 1991, 87, 3259.	1.7	10
102	Ambient temperature diodes and fieldâ€effect transistors in InSb/In1â^'xAlxSb. Applied Physics Letters, 1991, 59, 1761-1763.	3.3	45
103	A SEXAFS and X-ray standing wave study of the surface: Adsorbate-substrate and adsorbate-adsorbate registry. Surface Science, 1990, 230, 13-26.	1.9	56
104	Heteroepitaxial growth of InSb on (100)GaAs using molecular beam epitaxy. Applied Physics Letters, 1988, 53, 1189-1191.	3.3	67
105	The structure of the formate species on copper surfaces: new photoelectron diffraction results and sexafs data reassessed. Surface Science, 1988, 201, 228-244.	1.9	178
106	A simple X-ray standing wave technique for surface structure determination - theory and an application. Surface Science, 1988, 195, 237-254.	1.9	152
107	Simple x-ray standing-wave technique and its application to the investigation of the Cu(111) (â^š3 â^š3) Tj ETQq1 1 0.784314 rgBT /Ov	7.8	163
108	An angle-resolved photoemission study of the reaction of CH3SH and (CH3S)2 with Cu(111) and Ni(100). Surface Science, 1987, 187, 133-143.	1.9	59

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109	Synchrotron radiation core level photoemission investigation of the initial stages of oxidation of Al(111). Surface Science, 1987, 188, 1-14.	1.9	97
110	Nexafs determination of CO orientation on a stepped platinum surface. Surface Science, 1987, 183, 576-590.	1.9	35
111	Investigation of the Cu(111) (âˆš3 Ã— âˆš3)R30Â°-Cl structure using sexafs and photoelectron diffraction. Surface Science, 1987, 182, 213-230.	1.9	69
112	An X-ray absorption and photoelectron diffraction study of the Cu{100} c(2 Ã— 2) CO structure. Surface Science, 1986, 166, 221-233.	1.9	93
113	Electronic structure of the (2Ã—2)CÏ4gcarbidic phase on Ni{100}. Physical Review B, 1986, 34, 2199-2206.	3.2	59
114	Photoabsorption shape resonance in the adsorption system CO/K/Cu(100): A dilemma. Physical Review B, 1986, 34, 1340-1342.	3.2	39
115	Valence band photoemission study of the coadsorption of CO and K on Cu{100};. Surface Science, 1984, 138, 31-39.	1.9	52
116	Fieldâ€™s Metal Nanodroplets for Creating Phase-Change Materials. ACS Applied Nano Materials, 0, , .	5.0	4