

Michelle J S Spencer

List of Publications by Year in descending order

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108
papers

3,206
citations

147566

31
h-index

174990

52
g-index

111
all docs

111
docs citations

111
times ranked

4401
citing authors

#	ARTICLE	IF	CITATIONS
1	Gas sensing applications of 1D-nanostructured zinc oxide: Insights from density functional theory calculations. <i>Progress in Materials Science</i> , 2012, 57, 437-486.	16.0	195
2	Electronic Tuning of 2D MoS ₂ through Surface Functionalization. <i>Advanced Materials</i> , 2015, 27, 6225-6229.	11.1	194
3	Density functional theory study of the relaxation and energy of iron surfaces. <i>Surface Science</i> , 2002, 513, 389-398.	0.8	154
4	Fully Light-Controlled Memory and Neuromorphic Computation in Layered Black Phosphorus. <i>Advanced Materials</i> , 2021, 33, e2004207.	11.1	147
5	Ambient Protection of Few-Layer Black Phosphorus via Sequestration of Reactive Oxygen Species. <i>Advanced Materials</i> , 2017, 29, 1700152.	11.1	141
6	Liquid Metals in Catalysis for Energy Applications. <i>Joule</i> , 2020, 4, 2290-2321.	11.7	106
7	ZnO Nanostructures for Gas Sensing: Interaction of NO ₂ , NO, O, and N with the ZnO(101̄..0) Surface. <i>Journal of Physical Chemistry C</i> , 2010, 114, 10881-10893.	1.5	101
8	Multifunctional Optoelectronics via Harnessing Defects in Layered Black Phosphorus. <i>Advanced Functional Materials</i> , 2019, 29, 1901991.	7.8	97
9	Monolayer-to-bilayer transformation of silicenes and their structural analysis. <i>Nature Communications</i> , 2016, 7, 10657.	5.8	88
10	Activity of ZnO polar surfaces: an insight from surface energies. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 22139-22144.	1.3	87
11	2D/3D Hybrid of MoS ₂ /GaN for a High-Performance Broadband Photodetector. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2407-2414.	2.0	70
12	Adsorption of NO ₂ on Oxygen Deficient ZnO(21̄..1̄..0) for Gas Sensing Applications: A DFT Study. <i>Journal of Physical Chemistry C</i> , 2010, 114, 16603-16610.	1.5	67
13	Liquid-Metal Synthesized Ultrathin SnS Layers for High-Performance Broadband Photodetectors. <i>Advanced Materials</i> , 2020, 32, e2004247.	11.1	66
14	A New Surface and Structure for Silicene: Polygonal Silicene Formation on the Al(111) Surface. <i>Journal of Physical Chemistry C</i> , 2013, 117, 22142-22148.	1.5	62
15	First-principles study of structural and electronic properties of ultrathin silicon nanosheets. <i>Physical Review B</i> , 2010, 82, .	1.1	52
16	Adsorption of NO and NO ₂ on the ZnO() surface: A DFT study. <i>Surface Science</i> , 2009, 603, 3389-3399.	0.8	49
17	Surface reconstruction of ultrathin silicon nanosheets. <i>Chemical Physics Letters</i> , 2011, 506, 221-225.	1.2	47
18	Electrically Activated UV-A Filters Based on Electrochromic MoO ₃ . <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 16997-17003.	4.0	45

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19	Direct conversion of CO ₂ to solid carbon by Ga-based liquid metals. <i>Energy and Environmental Science</i> , 2022, 15, 595-600.	15.6	45
20	A Simplified Method for the 3D Printing of Molecular Models for Chemical Education. <i>Journal of Chemical Education</i> , 2018, 95, 88-96.	1.1	44
21	Maximum piezoelectricity in a few unit-cell thick planar ZnO – A liquid metal-based synthesis approach. <i>Materials Today</i> , 2021, 44, 69-77.	8.3	44
22	Sulfur adsorption on Fe(110): a DFT study. <i>Surface Science</i> , 2003, 540, 420-430.	0.8	42
23	A DFT study of the perovskite and hexagonal phases of BaTiO ₃ . <i>Computational Materials Science</i> , 2005, 34, 157-165.	1.4	41
24	Chirality-2: Development of a Multilevel Mobile Gaming App To Support the Teaching of Introductory Undergraduate-Level Organic Chemistry. <i>Journal of Chemical Education</i> , 2018, 95, 1216-1220.	1.1	41
25	Effect of ZnO Nanostructure Morphology on the Sensing of H ₂ S Gas. <i>Journal of Physical Chemistry C</i> , 2013, 117, 26106-26118.	1.5	39
26	Interaction of hydrogen with ZnO nanopowders – evidence of hydroxyl group formation. <i>Nanotechnology</i> , 2012, 23, 015705.	1.3	38
27	Electrically Sorted Single-Walled Carbon Nanotubes-Based Electron Transporting Layers for Perovskite Solar Cells. <i>IScience</i> , 2019, 14, 100-112.	1.9	36
28	The electronic and structural properties of novel organomodified Si nanosheets. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 15418.	1.3	35
29	Density functional theory modelling of and surfaces: Structure, properties and adsorption of N ₂ O. <i>Materials Chemistry and Physics</i> , 2010, 119, 505-514.	2.0	34
30	Reconstruction and electronic properties of silicon nanosheets as a function of thickness. <i>Nanoscale</i> , 2012, 4, 2906.	2.8	34
31	Predicting Thermal Properties of Crystals Using Machine Learning. <i>Advanced Theory and Simulations</i> , 2020, 3, 1900208.	1.3	34
32	Chemical modification of group IV graphene analogs. <i>Science and Technology of Advanced Materials</i> , 2018, 19, 76-100.	2.8	33
33	H ₂ S dissociation on the Fe(100) surface: An ab initio molecular dynamics study. <i>Surface Science</i> , 2008, 602, 1547-1553.	0.8	32
34	Anion secondary batteries utilizing a reversible BF ₄ insertion/extraction two-dimensional Si material. <i>Journal of Materials Chemistry A</i> , 2014, 2, 7588.	5.2	32
35	Micro versus macro solid phase extraction for monitoring water contaminants: A preliminary study using trihalomethanes. <i>Science of the Total Environment</i> , 2015, 512-513, 210-214.	3.9	30
36	Structural-Defect-Mediated Grafting of Alkylamine on Few-Layer MoS ₂ and Its Potential for Enhancement of Tribological Properties. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 30720-30730.	4.0	30

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37	How silicene on Ag(111) oxidizes: microscopic mechanism of the reaction of O ₂ with silicene. Scientific Reports, 2015, 5, 17570.	1.6	28
38	Ordered-vacancy-enabled indium sulphide printed in wafer-scale with enhanced electron mobility. Materials Horizons, 2020, 7, 827-834.	6.4	27
39	Surface Reactions of Ethylene Carbonate and Propylene Carbonate on the Li(001) Surface. Electrochimica Acta, 2017, 243, 320-330.	2.6	26
40	Coverage-Dependent Adsorption of Atomic Sulfur on Fe(110): A DFT Study. Journal of Physical Chemistry B, 2005, 109, 9604-9612.	1.2	25
41	Ab Initio Molecular Dynamics Study of H ₂ S Dissociation on the Fe(110) Surface. Journal of Physical Chemistry C, 2007, 111, 16372-16378.	1.5	24
42	Assessment of arsenic in Australian grown and imported rice varieties on sale in Australia and potential links with irrigation practises and soil geochemistry. Chemosphere, 2015, 138, 1008-1013.	4.2	24
43	Stability of Boronium Cation-Based Ionic Liquid Electrolytes on the Li Metal Anode Surface. ACS Applied Energy Materials, 2020, 3, 5497-5509.	2.5	24
44	Broad-Spectrum Solvent-free Layered Black Phosphorus as a Rapid Action Antimicrobial. ACS Applied Materials & Interfaces, 2021, 13, 17340-17352.	4.0	24
45	Surface defects on ZnO nanowires: implications for design of sensors. Journal of Physics Condensed Matter, 2012, 24, 305001.	0.7	23
46	Zinc oxide for gas sensing of formaldehyde: Density functional theory modelling of the effect of nanostructure morphology and gas concentration on the chemisorption reaction. Materials Chemistry and Physics, 2017, 193, 274-284.	2.0	23
47	Effect of nanostructuring of ZnO for gas sensing of nitrogen dioxide. Computational Materials Science, 2017, 132, 104-115.	1.4	23
48	Mechanochemical lithiation of layered polysilane. Chemical Communications, 2014, 50, 9761-9764.	2.2	21
49	Effect of S contamination on properties of Fe(100) surfaces. Surface Science, 2005, 590, 63-75.	0.8	20
50	The interaction of ethylammonium tetrafluoroborate [EtNH ₃ ⁺][BF ₄ ⁻] ionic liquid on the Li(001) surface: towards understanding early SEI formation on Li metal. Physical Chemistry Chemical Physics, 2019, 21, 10028-10037.	1.3	20
51	Further studies of iron adhesion: () surfaces. Surface Science, 2002, 515, L464-L468.	0.8	19
52	Ab initio study of S dynamics on iron surfaces. Surface Science, 2007, 601, 665-671.	0.8	19
53	Effect of S Arrangement on Fe(110) Properties at 1/3 Monolayer Coverage: A DFT Study. Journal of Physical Chemistry B, 2006, 110, 956-962.	1.2	18
54	Adsorption of toxic gases on silicene/Ag(111). Physical Chemistry Chemical Physics, 2019, 21, 17521-17537.	1.3	17

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55	Mixed Ionic&Electronic Charge Transport in Layered Black&Phosphorus for Low&Power Memory. <i>Advanced Functional Materials</i> , 2022, 32, 2107068.	7.8	16
56	Generating strong room-temperature photoluminescence in black phosphorus using organic molecules. <i>2D Materials</i> , 2019, 6, 015009.	2.0	15
57	Adsorption of silane and methylsilane on gold surfaces. <i>Surface Science</i> , 2004, 573, 151-168.	0.8	14
58	Monocrystalline Antimonene Nanosheets via Physical Vapor Deposition. <i>Advanced Materials Interfaces</i> , 2020, 7, 2001678.	1.9	14
59	Alkali-Assisted Hydrothermal Exfoliation and Surfactant-Driven Functionalization of <i>h</i> -BN Nanosheets for Lubrication Enhancement. <i>ACS Applied Nano Materials</i> , 2021, 4, 9143-9154.	2.4	14
60	DFT modelling of hydrogen on Cu(110)- and (111)-type clusters. <i>Molecular Simulation</i> , 2002, 28, 807-825.	0.9	13
61	Effect of Sulfur Impurity on Fe(110) Adhesion: A DFT Study. <i>Journal of Physical Chemistry B</i> , 2004, 108, 10965-10972.	1.2	13
62	Adsorption of atomic nitrogen and oxygen on $\text{ZnO}(2\text{ar}\{1\}\text{ar}\{1\}0)$ surface: a density functional theory study. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 144208.	0.7	13
63	Interactions between stacked layers of phenyl-modified silicene. <i>New Journal of Physics</i> , 2013, 15, 125018.	1.2	13
64	Development of Stable Boron Nitride Nanotube and Hexagonal Boron Nitride Dispersions for Electrophoretic Deposition. <i>Langmuir</i> , 2020, 36, 3425-3438.	1.6	13
65	Tuning the work function of the silicene/4 Å— 4 Ag(111) surface. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 7165-7173.	1.3	11
66	Soft X&ray Detectors Based on SnS Nanosheets for the Water Window Region. <i>Advanced Functional Materials</i> , 2022, 32, 2105038.	7.8	11
67	Tuning the Schottky barrier height in a multiferroic $\text{In}_2\text{Se}_3/\text{Fe}_3\text{GeTe}_2$ van der Waals heterojunction. <i>Nanoscale</i> , 2021, , .	2.8	11
68	Surface Functionalization of WS_2 Nanosheets with Alkyl Chains for Enhancement of Dispersion Stability and Tribological Properties. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 1334-1346.	4.0	10
69	Adsorption of methylsilane on copper surfaces. <i>Surface Science</i> , 2003, 543, 162-184.	0.8	9
70	Iron Surfaces: Pathways to Interfaces. <i>Surface Review and Letters</i> , 2003, 10, 169-174.	0.5	9
71	Adsorption of NO_2 on YSZ(111) and Oxygen-Enriched YSZ(111) Surfaces. <i>Journal of Physical Chemistry C</i> , 2013, 117, 12472-12482.	1.5	9
72	Differential Work-Function Enabled Bifunctional Switching in Strontium Titanate Flexible Resistive Memories. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 7326-7333.	4.0	9

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73	Nicotine Sensors for Wearable Battery-Free Monitoring of Vaping. ACS Sensors, 2022, 7, 82-88.	4.0	9
74	Infrared Spectroscopy-Based Metabolomic Analysis for the Detection of Preharvest Sprouting in Grain. Cereal Chemistry, 2016, 93, 444-449.	1.1	8
75	Phenol-Modified Silicene: Preferred Substitution Site and Electronic Properties. Journal of Physical Chemistry C, 2016, 120, 6762-6770.	1.5	8
76	Using 3D Printing to Visualize 2D Chromatograms and NMR Spectra for the Classroom. Journal of Chemical Education, 2021, 98, 1024-1030.	1.1	8
77	Adsorption of SiH ₄ on copper () and () surfaces. Surface Science, 2002, 505, 308-324.	0.8	7
78	Effect of Sulfur Coverage on Fe(110) Adhesion: A DFT Study. Journal of Physical Chemistry B, 2005, 109, 10204-10212.	1.2	7
79	Interaction of hydrogen with zinc oxide nanorods: why the spacing is important. Nanotechnology, 2011, 22, 135704.	1.3	7
80	Catalytic potential of highly defective (211) surfaces of zinc blende ZnO. Physical Chemistry Chemical Physics, 2015, 17, 27683-27689.	1.3	7
81	Manipulation of carbon nanotube magnetism with metal-rich iron nanoparticles. Journal of Materials Chemistry C, 2016, 4, 1215-1227.	2.7	7
82	Spectroscopic and Computational Study of Boronium Ionic Liquids and Electrolytes. Chemistry - A European Journal, 2021, 27, 12826-12834.	1.7	7
83	Tuning the band gap of silicene by functionalisation with naphthyl and anthracyl groups. Journal of Chemical Physics, 2016, 144, 114704.	1.2	6
84	Uncovering New Buckled Structures of Bilayer GaN: A First-Principles Study. Journal of Physical Chemistry C, 2019, 123, 1939-1947.	1.5	6
85	Combining computational and experimental approaches to select chromophores to enable the detection of fatty acids via HPLC. Analytical Methods, 2019, 11, 2952-2959.	1.3	5
86	Interplay of Mechanical and Chemical Tunability of Phosphorene for Flexible Nanoelectronic Applications. Journal of Physical Chemistry C, 2020, 124, 24391-24399.	1.5	5
87	The (In)Stability of the Ionic Liquids [(TMEDA)BH ₂][TFSI] and [FSI] on the Li(001) Surface. Batteries and Supercaps, 2021, 4, 1126-1134.	2.4	5
88	Improving sensing of formaldehyde using ZnO nanostructures with surface-adsorbed oxygen. Nanoscale Advances, 2022, 4, 546-561.	2.2	5
89	Hydrogen bonding in mixed ligand copper organophosphonates. Chemical Physics Letters, 2003, 378, 400-405.	1.2	4
90	Density Functional Theory and ab Initio Molecular Dynamics Investigation of Hydronium Interactions with Graphene. Energy Procedia, 2017, 110, 518-522.	1.8	4

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91	Fluorinated Boron-Based Anions for Higher Voltage Li Metal Battery Electrolytes. <i>Nanomaterials</i> , 2021, 11, 2391.	1.9	4
92	Electrochemical Stability of Zinc and Copper Surfaces in Protic Ionic Liquids. <i>Langmuir</i> , 2022, 38, 4633-4644.	1.6	4
93	Towards higher electrochemical stability of electrolytes: lithium salt design through <i>in silico</i> screening. <i>Journal of Materials Chemistry A</i> , 2022, 10, 13254-13265.	5.2	4
94	The adsorption of NO on YSZ(111) and oxygen-enriched YSZ(111) surfaces. <i>Chemical Physics Letters</i> , 2014, 593, 61-68.	1.2	3
95	The interaction of several fluorinated ionic liquids on the LiF(001) surface. <i>Surfaces and Interfaces</i> , 2021, 22, 100836.	1.5	3
96	Black Phosphorus-Diketopyrrolopyrrole Polymer Semiconductor Hybrid for Enhanced Charge Transfer and Photodetection. <i>Advanced Photonics Research</i> , 2021, 2, 2100150.	1.7	3
97	Mono- to few-layer non-van der Waals 2D lanthanide-doped NaYF ₄ nanosheets with upconversion luminescence. <i>2D Materials</i> , 2021, 8, 015005.	2.0	3
98	Reactive Oxygen Species Sequestration Induced Synthesis of β -PbO and Its Polymorphic Transformation to α -PbO at Atomically Thin Regimes. <i>ACS Nano</i> , 2022, 16, 10679-10691.	7.3	3
99	Density functional theory calculations of phenol-modified monolayer silicon nanosheets. , 2013, , .		2
100	Theoretical insight on the origin of anelasticity in zinc oxide nanowires. <i>Nanoscale</i> , 2020, 12, 2439-2444.	2.8	2
101	Broadband Photodetectors: Liquid-Metal Synthesized Ultrathin SnS Layers for High-Performance Broadband Photodetectors (<i>Adv. Mater.</i> 45/2020). <i>Advanced Materials</i> , 2020, 32, 2070338.	11.1	2
102	Theoretical Studies of Functionalised Silicene. <i>Springer Series in Materials Science</i> , 2016, , 107-127.	0.4	1
103	Role of Surface Paramagnetic Oxygen Species in the Desulfurization Reactions on Zinc Oxide. <i>Journal of Physical Chemistry C</i> , 2021, 125, 4559-4566.	1.5	1
104	Guest Editorial Introduction. <i>Molecular Simulation</i> , 2016, 42, 447-447.	0.9	0
105	The science and life of Ian K. Snook. <i>Molecular Simulation</i> , 2016, 42, 448-457.	0.9	0
106	Elemental Two-Dimensional Materials Beyond Graphene. <i>ChemistrySelect</i> , 2017, 2, .	0.7	0
107	Zero valence iron nanocube decoration of graphitic nanoplatelets. <i>Nanotechnology</i> , 2022, 33, 025704.	1.3	0
108	Understanding the Link between Anion Structure and Lithium Coordination. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0