David J Lewis

List of Publications by Year
in descending order

103	4,615	126708	102304
papers	citations	33 h-index	66 g-index

107	107	107	7871
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Production of few-layer phosphorene by liquid exfoliation of black phosphorus. Chemical Communications, 2014, 50, 13338-13341.	2.2	667
2	Synthesis, Properties, and Applications of Transition Metal-Doped Layered Transition Metal Dichalcogenides. Chemistry of Materials, 2016, 28, 1965-1974.	3.2	424
3	Highly Luminescent, Triple- and Quadruple-Stranded, Dinuclear Eu, Nd, and Sm(III) Lanthanide Complexes Based on Bis-Diketonate Ligands. Journal of the American Chemical Society, 2004, 126, 9413-9424.	6.6	339
4	Tin(II) Sulfide (SnS) Nanosheets by Liquid-Phase Exfoliation of Herzenbergite: IVâ€“VI Main Group Two-Dimensional Atomic Crystals. Journal of the American Chemical Society, 2015, 137, 12689-12696.	6.6	220
5	Nanostructured Aptamer-Functionalized Black Phosphorus Sensing Platform for Label-Free Detection of Myoglobin, a Cardiovascular Disease Biomarker. ACS Applied Materials & Interfaces, 2016, 8, 22860-22868.	4.0	208
6	Fully printed high performance humidity sensors based on two-dimensional materials. Nanoscale, 2018, 10, 5599-5606.	2.8	142
7	Luminescent nanobeads: attachment of surface reactive Eu(iii) complexes to gold nanoparticles. Chemical Communications, 2006, , 1433.	2.2	126
8	Purely Heterometallic Lanthanide(III) Macrocycles through Controlled Assembly of Disulfide Bonds for Dual Color Emission. Journal of the American Chemical Society, 2011, 133, 1033-1043.	6.6	103
9	On the interaction of copper(<scp>ii</scp>) with disulfiram. Chemical Communications, 2014, 50, 13334-13337.	2.2	92
10	Routes to tin chalcogenide materials as thin films or nanoparticles: a potentially important class of semiconductor for sustainable solar energy conversion. Inorganic Chemistry Frontiers, 2014, 1, 577-598.	3.0	87
11	Ambient-air-stable inorganic Cs₂SnI₆double perovskite thin filmsviaaerosol-assisted chemical vapour deposition. Journal of Materials Chemistry A, 2018, 6, 11205-11214.	5.2	85
12	Shining a light on transition metal chalcogenides for sustainable photovoltaics. Chemical Science, 2017, 8, 4177-4187.	3.7	84
13	pH-controlled delivery of luminescent europium coated nanoparticles into platelets. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 1862-1867.	3.3	78
14	Thin Films of Molybdenum Disulfide Doped with Chromium by Aerosol-Assisted Chemical Vapor Deposition (AACVD). Chemistry of Materials, 2015, 27, 1367-1374.	3.2	78
15	In situ investigation of degradation at organometal halide perovskite surfaces by X-ray photoelectron spectroscopy at realistic water vapour pressure. Chemical Communications, 2017, 53, 5231-5234.	2.2	78
16	Ambient pressure aerosol-assisted chemical vapour deposition of (CH₃NH₃)PbBr₃, an inorganicâ€“organic perovskite important in photovoltaics. Chemical Communications, 2014, 50, 6319-6321.	2.2	75
17	Thin films of tin(II) sulphide (SnS) by aerosol-assisted chemical vapour deposition (AACVD) using tin(II) dithiocarbamates as single-source precursors. Journal of Crystal Growth, 2015, 415, 93-99.	0.7	75
18	Solution processing of two-dimensional black phosphorus. Chemical Communications, 2017, 53, 1445-1458.	2.2	63

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19	Transition metal doped pyrite (FeS₂) thin films: structural properties and evaluation of optical band gap energies. Journal of Materials Chemistry C, 2015, 3, 12068-12076.	2.7	59
20	Bis(piperidinedithiocarbamato)pyridinecadmium(<scp>ii</scp>) as a single-source precursor for the synthesis of CdS nanoparticles and aerosol-assisted chemical vapour deposition (AACVD) of CdS thin films. New Journal of Chemistry, 2014, 38, 6073-6080.	1.4	55
21	De Novo Design of Ln(III) Coiled Coils for Imaging Applications. Journal of the American Chemical Society, 2014, 136, 1166-1169.	6.6	55
22	Mechanical Properties of Molybdenum Disulfide and the Effect of Doping: An in Situ TEM Study. ACS Applied Materials & Interfaces, 2015, 7, 20829-20834.	4.0	50
23	Heterocyclic dithiocarbamato-iron(<scp>iii</scp>) complexes: single-source precursors for aerosol-assisted chemical vapour deposition (AACVD) of iron sulfide thin films. Dalton Transactions, 2016, 45, 2647-2655.	1.6	49
24	Chemical vapour deposition of rhenium disulfide and rhenium-doped molybdenum disulfide thin films using single-source precursors. Journal of Materials Chemistry C, 2016, 4, 2312-2318.	2.7	46
25	Supercapacitor Electrodes from the in Situ Reaction between Two-Dimensional Sheets of Black Phosphorus and Graphene Oxide. ACS Applied Materials & Interfaces, 2018, 10, 10330-10338.	4.0	44
26	Sequential bottom-up and top-down processing for the synthesis of transition metal dichalcogenide nanosheets: the case of rhenium disulfide (ReS₂). Chemical Communications, 2016, 52, 7878-7881.	2.2	42
27	Synthesis of pyrite thin films and transition metal doped pyrite thin films by aerosol-assisted chemical vapour deposition. New Journal of Chemistry, 2015, 39, 1013-1021.	1.4	41
28	Exploring the versatility of liquid phase exfoliation: producing 2D nanosheets from talcum powder, cat litter and beach sand. 2D Materials, 2017, 4, 025054.	2.0	39
29	Direct synthesis of MoS₂ or MoO₃via thermolysis of a dialkyl dithiocarbamato molybdenum(<scp>iv</scp>) complex. Chemical Communications, 2019, 55, 99-102.	2.2	38
30	A Review of the Synthesis, Properties, and Applications of Bulk and Two-Dimensional Tin (II) Sulfide (SnS). Applied Sciences (Switzerland), 2021, 11, 2062.	1.3	37
31	Lanthanide-coated gold nanoparticles for biomedical applications. Coordination Chemistry Reviews, 2014, 273-274, 213-225.	9.5	36
32	Intracellular synchrotron nanoimaging and DNA damage/genotoxicity screening of novel lanthanide-coated nanovectors. Nanomedicine, 2010, 5, 1547-1557.	1.7	35
33	On the stability of surfactant-stabilised few-layer black phosphorus in aqueous media. RSC Advances, 2016, 6, 86955-86958.	1.7	35
34	Formation and Healing of Defects in Atomically Thin GaSe and InSe. ACS Nano, 2019, 13, 5112-5123.	7.3	35
35	Updating the road map to metal-halide perovskites for photovoltaics. Journal of Materials Chemistry A, 2017, 5, 17135-17150.	5.2	33
36	Evaluation of quinoline as a remote sensitiser for red and near-infrared emissive lanthanide(iii) ions in solution and the solid state. Dalton Transactions, 2012, 41, 13138.	1.6	31

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37	High entropy metal chalcogenides: synthesis, properties, applications and future directions. Chemical Communications, 2022, 58, 8025-8037.	2.2	31
38	Scalable and Universal Route for the Deposition of Binary, Ternary, and Quaternary Metal Sulfide Materials from Molecular Precursors. ACS Applied Energy Materials, 2020, 3, 1952-1961.	2.5	30
39	Single-Source Precursor for Tungsten Dichalcogenide Thin Films: Mo_{1â€“x}W_xS₂ (0 â‰¤ x â‰¤ 1) Alloys by Aerosol-Assisted Chemical Vapor Deposition. Chemistry of Materials, 2017, 29, 3858-3862.	3.2	28
40	Black phosphorus with near-superhydrophobic properties and long-term stability in aqueous media. Chemical Communications, 2018, 54, 3831-3834.	2.2	28
41	A molecular precursor route to quaternary chalcogenide CFTS (Cu2FeSnS4) powders as potential solar absorber materials. RSC Advances, 2019, 9, 24146-24153.	1.7	28
42	Renewable Adsorbent for the Separation of Surfactant-Stabilized Oil in Water Emulsions Based on Nanostructured Sawdust. ACS Sustainable Chemistry and Engineering, 2019, 7, 18935-18942.	3.2	28
43	Flexible nanoporous activated carbon for adsorption of organics from industrial effluents. Nanoscale, 2021, 13, 15311-15323.	2.8	26
44	A Freeâ€Standing and Selfâ€Healable 2D Supramolecular Material Based on Hydrogen Bonding: A Nanowire Array with Subâ€2â€nm Resolution. Small, 2017, 13, 1604077.	5.2	24
45	Chemical vapor deposition of tin sulfide from diorganotin(IV) dixanthates. Journal of Materials Science, 2019, 54, 2315-2323.	1.7	24
46	Bioinspired scaffolds that sequester lead ions in physically damaged high efficiency perovskite solar cells. Chemical Communications, 2021, 57, 994-997.	2.2	24
47	Dual Functionalization of Liquidâ€Exfoliated Semiconducting 2Hâ€MoS₂ with Lanthanide Complexes Bearing Magnetic and Luminescence Properties. Advanced Functional Materials, 2017, 27, 1703646.	7.8	23
48	Synthesis of Bi_{2â^’2x}Sb_{2x}S₃ (0 â‰¤ x â‰¤ 1) solid solutions from solventless thermolysis of metal xanthate precursors. Journal of Materials Chemistry C, 2018, 6, 12652-12659.	2.7	23
49	Synthesis of nanostructured powders and thin films of iron sulfide from molecular precursors. RSC Advances, 2018, 8, 29096-29103.	1.7	21
50	Silica Nanoparticles for Micro-Particle Imaging Velocimetry: Fluorosurfactant Improves Nanoparticle Stability and Brightness of Immobilized Iridium(III) Complexes. Langmuir, 2013, 29, 14701-14708.	1.6	18
51	Morphology and band gap controlled AACVD of CdSe and CdS Se1â^’ thin films using novel single source precursors: Bis(diethyldithio/diselenocarbamato)cadmium(II). Materials Science in Semiconductor Processing, 2015, 40, 848-854.	1.9	18
52	The influence of precursor on rhenium incorporation into Re-doped MoS₂ (Mo_{1â^’x}Re_xS₂) thin films by aerosol-assisted chemical vapour deposition (AACVD). Journal of Materials Chemistry C, 2017, 5, 9044-9052.	2.7	18
53	On the phase control of CuInS₂ nanoparticles from Cu-/In-xanthates. Dalton Transactions, 2018, 47, 5304-5309.	1.6	16
54	Room-Temperature Production of Nanocrystalline Molybdenum Disulfide (MoS₂) at the Liquidâ^’Liquid Interface. Chemistry of Materials, 2019, 31, 5384-5391.	3.2	16

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55	Synthetic 2-D lead tin sulfide nanosheets with tuneable optoelectronic properties from a potentially scalable reaction pathway. Chemical Science, 2019, 10, 1035-1045.	3.7	16
56	Synthesis of ternary copper antimony sulfide via solventless thermolysis or aerosol assisted chemical vapour deposition using metal dithiocarbamates. Scientific Reports, 2022, 12, 5627.	1.6	16
57	Synthesis of High Entropy Lanthanide Oxysulfides via the Thermolysis of a Molecular Precursor Cocktail. Journal of the American Chemical Society, 2021, 143, 21560-21566.	6.6	16
58	Property Self-Optimization During Wear of MoS₂. ACS Applied Materials & Interfaces, 2017, 9, 1953-1958.	4.0	15
59	High magnetic relaxivity in a fluorescent CdSe/CdS/ZnS quantum dot functionalized with MRI contrast molecules. Chemical Communications, 2017, 53, 10500-10503.	2.2	14
60	Exploiting Inherent Instability of 2D Black Phosphorus for Controlled Phosphate Release from Blow-Spun Poly(lactide-co-glycolide) Nanofibers. ACS Applied Nano Materials, 2018, 1, 4190-4197.	2.4	14
61	Surface Engineering of Ceramic Nanomaterials for Separation of Oil/Water Mixtures. Frontiers in Chemistry, 2020, 8, 578.	1.8	14
62	Direct synthesis of nanostructured silver antimony sulfide powders from metal xanthate precursors. Scientific Reports, 2021, 11, 3053.	1.6	14
63	Diatom Frustules as a Biomineralized Scaffold for the Growth of Molybdenum Disulfide Nanosheets. Chemistry of Materials, 2016, 28, 5582-5586.	3.2	13
64	Air-Stable Methylammonium Lead Iodide Perovskite Thin Films Fabricated via Aerosol-Assisted Chemical Vapor Deposition from a Pseudohalide Pb(SCN)₂ Precursor. ACS Applied Energy Materials, 2019, 2, 6012-6022.	2.5	13
65	Rapid and Low-Temperature Molecular Precursor Approach toward Ternary Layered Metal Chalcogenides and Oxides: Mo_{1â€“x}W_xS₂ and Mo_{1â€“x}W_xO₃ Alloys (0 â‰¤ x â‰¤ 1). Chemistry of Materials, 2020, 32, 7895-7907.	3.2	13
66	Scalable synthesis of Cuâ€“Sbâ€“S phases from reactive melts of metal xanthates and effect of cationic manipulation on structural and optical properties. Scientific Reports, 2021, 11, 1887.	1.6	13
67	Luminescent Gold Surfaces for Sensing and Imaging: Patterning of Transition Metal Probes. ACS Applied Materials & Interfaces, 2014, 6, 11598-11608.	4.0	12
68	Tailoring iridium luminescence and gold nanoparticle size for imaging of microvascular blood flow. Nanomedicine, 2017, 12, 2725-2740.	1.7	12
69	Nanoscale Chevrel-Phase Mo₆S₈ Prepared by a Molecular Precursor Approach for Highly Efficient Electrocatalysis of the Hydrogen Evolution Reaction in Acidic Media. ACS Applied Energy Materials, 2021, 4, 13015-13026.	2.5	12
70	Important Phase Control of Indium Sulfide Nanomaterials by Choice of Indium(III) Xanthate Precursor and Thermolysis Temperature. European Journal of Inorganic Chemistry, 2019, 2019, 1421-1432.	1.0	11
71	New insights into polymer mediated formation of anatase mesocrystals. CrystEngComm, 2017, 19, 3281-3287.	1.3	10
72	Molecular Precursor Route to Bournonite (CuPbSbS₃) Thin Films and Powders. Inorganic Chemistry, 2021, 60, 13691-13698.	1.9	10

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73	Decoupling Structure and Composition of CH₃NH₃PbI_{3â€“x}Br_x Films Prepared by Combined One-Step and Two-Step Deposition. ACS Applied Energy Materials, 2018, 1, 5567-5578.	2.5	9
74	Intrinsic effects of thickness, surface chemistry and electroactive area on nanostructured MoS2 electrodes with superior stability for hydrogen evolution. Electrochimica Acta, 2021, 382, 138257.	2.6	9
75	High-Performance Nanostructured MoS₂ Electrodes with Spontaneous Ultralow Gold Loading for Hydrogen Evolution. Journal of Physical Chemistry C, 2021, 125, 20940-20951.	1.5	9
76	Nanocubes of Mo₆S₈ Chevrel phase as active electrode material for aqueous lithium-ion batteries. Nanoscale, 2022, 14, 10125-10135.	2.8	9
77	Full compositional control of PbS_xSe_{1â^'x} thin films by the use of acylchalcogourato lead(<scp>ii</scp>) complexes as precursors for AACVD. Dalton Transactions, 2018, 47, 16938-16943.	1.6	8
78	Chemical vapour deposition of chromium-doped tungsten disulphide thin films on glass and steel substrates from molecular precursors. Journal of Materials Chemistry C, 2018, 6, 9537-9544.	2.7	8
79	Accessing Î³-Ga₂S₃ by solventless thermolysis of gallium xanthates: a low-temperature limit for crystalline products. Dalton Transactions, 2019, 48, 15605-15612.	1.6	8
80	Solid solutions of M_{2â^'2x}In_{2x}S₃ (M = Bi or Sb) by solventless thermolysis. Journal of Materials Chemistry C, 2019, 7, 5112-5121.	2.7	8
81	A novel and potentially scalable CVD-based route towards SnO2:Mo thin films as transparent conducting oxides. Journal of Materials Science, 2021, 56, 15921-15936.	1.7	8
82	Tunable structural and optical properties of CuInS2 colloidal quantum dots as photovoltaic absorbers. RSC Advances, 2021, 11, 21351-21358.	1.7	8
83	Controlled assembly of heterometallic lanthanide(III) macrocycles: incorporation of photoactive and highly paramagnetic metal centres within a single complex. Supramolecular Chemistry, 2012, 24, 135-142.	1.5	7
84	Heterometallic 3dâ€“4f Complexes as Air-Stable Molecular Precursors in Low Temperature Syntheses of Stoichiometric Rare-Earth Orthoferrite Powders. Inorganic Chemistry, 2020, 59, 15796-15806.	1.9	7
85	Luminescent ruthenium(II) tris-bipyridyl complex caged in nanoscale silica for particle velocimetry studies in microchannels. Measurement Science and Technology, 2012, 23, 084004.	1.4	6
86	Optimization of superhydrophobicity at the surface of iron sulfide thin films by a wet chemical approach. Materials Research Bulletin, 2021, 144, 111476.	2.7	6
87	Thin films of formamidinium lead iodide (FAPI) deposited using aerosol assisted chemical vapour deposition (AACVD). Scientific Reports, 2020, 10, 22245.	1.6	6
88	Investigating the Effect of Steric Hindrance within CdS Single-Source Precursors on the Material Properties of AACVD and Spin-Coat-Deposited CdS Thin Films. Inorganic Chemistry, 2022, 61, 8206-8216.	1.9	6
89	Synthesis of iron sulfide thin films and powders from new xanthate precursors. Journal of Crystal Growth, 2019, 522, 175-182.	0.7	5
90	Preparation of solution processed photodetectors comprised of two-dimensional tin(<scp>ii</scp>) sulfide nanosheet thin films assembled via the Langmuirâ€“Blodgett method. RSC Advances, 2021, 11, 26813-26819.	1.7	5

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91	Synthesis, X-ray Single-Crystal Structural Characterization, and Thermal Analysis of Bis(O-alkylxanthato)Cd(II) and Bis(O-alkylxanthato)Zn(II) Complexes Used as Precursors for Cadmium and Zinc Sulfide Thin Films. Inorganic Chemistry, 2021, 60, 7573-7583.	1.9	5
92	Tunable structural, morphological and optical properties of undoped, Mn, Ni and Ag-doped CuInS2 thin films prepared by AACVD. Materials Science in Semiconductor Processing, 2022, 137, 106224.	1.9	5
93	Synthesis of molybdenum-doped rhenium disulfide alloy using aerosol-assisted chemical vapour deposition. Materials Science in Semiconductor Processing, 2021, 127, 105718.	1.9	4
94	Paul Oâ€™Brien: Materials Chemistry Pioneer (Jan 22, 1954â€“Oct 16, 2018). Chemistry of Materials, 2018, 30, 8113-8115.	3.2	3
95	Synthesis of indium oxide microparticles using aerosol assisted chemical vapour deposition. RSC Advances, 2020, 10, 22487-22490.	1.7	3
96	Testing the Efficacy of the Synthesis of Iron Antimony Sulfide Powders from Single Source Precursors. Inorganics, 2021, 9, 61.	1.2	3
97	Structural Investigations of Î±-MnS Nanocrystals and Thin Films Synthesized from Manganese(II) Xanthates by Hot Injection, Solvent-Less Thermolysis, and Doctor Blade Routes. ACS Omega, 2021, 6, 27716-27725.	1.6	3
98	Sustainable ITO films with reduced indium content deposited by AACVD. Journal of Materials Chemistry C, 2022, 10, 579-589.	2.7	3
99	Ricinoleic Acid as a Green Alternative to Oleic Acid in the Synthesis of Doped Nanocrystals. ChemistrySelect, 2018, 3, 13548-13552.	0.7	2
100	Paul O'Brien. 22 January 1954â€”16 October 2018. Biographical Memoirs of Fellows of the Royal Society, 2020, 69, 443-466.	0.1	2
101	A review of two-dimensional nanomaterials beyond graphene. SPR Nanoscience, 0, , 108-141.	0.3	2
102	Formation and Characterization of Model Iron Sulfide Scales with Disulfides and Thiols on Steel Pipeline Materials by an Aerosol-Assisted Chemical Vapor Method. Energy & Fuels, 2017, 31, 2496-2500.	2.5	0
103	Biological applications of nanomaterials. SPR Nanoscience, 2016, , 276-323.	0.3	0