Mohammad Afzaal

List of Publications by Year
in descending order

91 papers	3,787 citations	94433 37 h-index	128289 60 g-index
92 all docs	92 docs citations	92 times ranked	4276 citing authors

#	Article	IF	Citations
1	Precursor Chemistry for Main Group Elements in Semiconducting Materials. Chemical Reviews, 2010, 110, 4417-4446.	47.7	316
2	Recent developments in IIâ€“VI and IIIâ€“VI semiconductors and their applications in solar cells. Journal of Materials Chemistry, 2006, 16, 1597-1602.	6.7	229
3	The Chemical Vapor Deposition of Nickel Phosphide or Selenide Thin Films from a Single Precursor. Journal of the American Chemical Society, 2008, 130, 2420-2421.	13.7	207
4	A New Route to Antimony Telluride Nanoplates from a Single-Source Precursor. Journal of the American Chemical Society, 2006, 128, 3120-3121.	13.7	133
5	Using coordination chemistry to develop new routes to semiconductor and other materials. Coordination Chemistry Reviews, 2007, 251, 1878-1888.	18.8	124
6	Transient Optical Studies of Interfacial Charge Transfer at Nanostructured Metal Oxide/PbS Quantum Dot/Organic Hole Conductor Heterojunctions. Journal of the American Chemical Society, 2010, 132, 2743-2750.	13.7	110
7	The synthesis of amine-capped magnetic (Fe, Mn, Co, Ni) oxide nanocrystals and their surface modification for aqueous dispersibility. Journal of Materials Chemistry, 2006, 16, 2175.	6.7	109
8	Growth of lead chalcogenide thin films using single-source precursors. Journal of Materials Chemistry, 2004, 14, 1310.	6.7	96
9	Remarkable Magneto-Optical Properties of Europium Selenide Nanoparticles with Wide Energy Gaps. Journal of the American Chemical Society, 2008, 130, 5710-5715.	13.7	87
10	The N-alkyldithiocarbamato complexes [M(S2CNHR)2] (M = Cd(ii) Zn(ii); R = C2H5, C4H9, C6H13, C12H25); their synthesis, thermal decomposition and use to prepare of nanoparticles and nanorods of CdS. Dalton Transactions, 2006, , 4499.	3.3	85
11	Deposition of II-VI Thin Films by LP-MOCVD Using Novel Single-Source Precursors. European Journal of Inorganic Chemistry, 2004, 2004, 171-177.	2.0	79
12	Solid state synthesis of tin-doped ZnO at room temperature: Characterization and its enhanced gas sensing and photocatalytic properties. Journal of Hazardous Materials, 2011, 193, 194-199.	12.4	78
13	Chemical routes to chalcogenide materials as thin films or particles with critical dimensions with the order of nanometres. Journal of Materials Chemistry, 2010, 20, 4031.	6.7	77
14	Metal complexes of selenophosphinates from reactions with (R2PSe)2Se: [M(R2PSe2)n] (M = ZnII, CdII,) Tj ETQq0 0 0 rgBT /Overlock 10 2182.	4.1	75
15	Chemical Vapor Deposition of Indium Selenide and Gallium Selenide Thin Films from Mixed Alkyl/Dialkylselenophosphorylamides. Chemistry of Materials, 2003, 15, 4205-4210.	6.7	71
16	The single molecular precursor approach to metal telluride thin films: imino-bis(diisopropylphosphine tellurides) as examples. Chemical Society Reviews, 2007, 36, 1622.	38.1	71
17	Novel Bimetallic Thiocarboxylate Compounds as Single-Source Precursors to Binary and Ternary Metal Sulfide Materials. Chemistry of Materials, 2003, 15, 2383-2391.	6.7	70
18	Synthesis of ZnO Hexagonal Single-Crystal Slices with Predominant (0001) and (0001Ì…) Facets by Poly(ethylene glycol)-Assisted Chemical Bath Deposition. Journal of the American Chemical Society, 2009, 131, 15106-15107.	13.7	69

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19	Synthesis, Structures, and Multinuclear NMR Spectra of Tin(II) and Lead(II) Complexes of Tellurium-Containing Imidodiphosphinate Ligands: Preparation of Two Morphologies of Phase-Pure PbTe from a Single-Source Precursor. Inorganic Chemistry, 2010, 49, 1198-1205.	4.0	68
20	The synthesis, X-ray structures and CVD studies of some group 11 complexes of iminobis(diisopropylphosphine selenides) and their use in the deposition of I/III/VI photovoltaic materials. Journal of Materials Chemistry, 2004, 14, 233.	6.7	65
21	Selective excitation of Eu³⁺in the core of small Î²-NaGdF₄nanocrystals. Journal of Materials Chemistry C, 2013, 1, 801-807.	5.5	65
22	A novel method for synthesizing EuS nanocrystals from a single-source precursor under white LED irradiation. Chemical Communications, 2005, , 242.	4.1	63
23	Controlled Synthesis of Tuned Bandgap Nanodimensional Alloys of PbS_xSe_{1â^’x}. Journal of the American Chemical Society, 2011, 133, 5602-5609.	13.7	59
24	Chemical vapour deposition of IIâ€“VI semiconductor thin films using M[(TePiPr2)2N]2(M = Cd, Hg) as single-source precursors. Journal of Materials Chemistry, 2006, 16, 966-969.	6.7	56
25	Novel inorganic rings and materials deposition. Journal of Organometallic Chemistry, 2007, 692, 2669-2677.	1.8	54
26	Preparation of zinc containing materials. New Journal of Chemistry, 2007, 31, 2029.	2.8	53
27	Tribenzyltin(IV)chloride Thiosemicarbazones: Novel Single Source Precursors for Growth of SnS Thin Films. Chemical Vapor Deposition, 2008, 14, 292-295.	1.3	52
28	Flow reactor synthesis of CdSe, CdS, CdSe/CdS and CdSeS nanoparticles from single molecular precursor(s). Journal of Materials Chemistry, 2011, 21, 18768.	6.7	50
29	Deposition of MSe (M = Cd, Zn) Filmsby LP-MOCVD from Novel Single-Source Precursors M[(SePPh2)2N]2. Chemical Vapor Deposition, 2002, 8, 187-189.	1.3	46
30	Aerosol-assisted chemical vapour deposition of indium telluride thin films from {In(Î¼-Te)[N(iPr2PTe)2]}3. Journal of Materials Chemistry, 2006, 16, 4542-4547.	6.7	46
31	Phosphine stabilized copper(i) complexes of dithiocarbamates and xanthates and their decomposition pathways. New Journal of Chemistry, 2011, 35, 2773.	2.8	44
32	Syntheses, X-ray structures and AACVD studies of group 11 ditelluroimidodiphosphinate complexes. Dalton Transactions, 2007, , 1528.	3.3	43
33	The deposition of thin films of CuME2 by CVD techniques (M = In, Ga and E = S, Se). Journal of Materials Chemistry, 2003, 13, 1942.	6.7	42
34	Facile and reproducible syntheses of bis(dialkylselenophosphenyl)-selenides and -diselenides: X-ray structures of (iPr2PSe)2Se, (iPr2PSe)2Se2 and (Ph2PSe)2Se. Chemical Communications, 2006, , 2179.	4.1	41
35	Low temperature CVD growth of PbS films on plastic substrates. Chemical Communications, 2011, 47, 1991.	4.1	41
36	Single-source precursors to ternary silver indium sulfide materials. Chemical Communications, 2001, , 2304-2305.	4.1	40

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37	Understanding the Decomposition Pathways of Mixed Sulfur/Selenium Lead Phosphinato Complexes Explaining the Formation of Lead Selenide. Journal of Physical Chemistry C, 2011, 115, 16904-16909.	3.1	37
38	Passivation of lanthanide surface sites in sub-10Ânm NaYF4:Eu3+ nanocrystals. Journal of Nanoparticle Research, 2012, 14, 1228.	1.9	37
39	Multicolor light emitters based on energy exchange between Tb and Eu ions co-doped into ultrasmall Î²-NaYF4 nanocrystals. Journal of Materials Chemistry, 2012, 22, 5356.	6.7	37
40	Studies of Molybdenum Disulfide Nanostructures Prepared by AACVD Using Single-Source Precursors. Chemical Vapor Deposition, 2006, 12, 597-599.	1.3	35
41	Silica coated PbS nanowires. Journal of Materials Chemistry, 2006, 16, 1113.	6.7	34
42	Deposition of copper selenide thin films and nanoparticles. Journal of Crystal Growth, 2006, 297, 61-65.	1.5	34
43	Morphological Evolution of PbSe Crystals via the CVD Route. Chemistry of Materials, 2010, 22, 4619-4624.	6.7	34
44	Single-Source Routes to Cobalt Sulfide and Manganese Sulfide Thin Films. Chemical Vapor Deposition, 2005, 11, 91-94.	1.3	33
45	Special Role for Zinc Stearate and Octadecene in the Synthesis of Luminescent ZnSe Nanocrystals. Chemistry of Materials, 2015, 27, 3797-3800.	6.7	29
46	Metal-organic chemical vapor deposition of indium selenide films using a single-source precursor. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 116, 391-394.	3.5	28
47	Nickel(ii) complexes of heterodichalcogenido and monochalcogenido imidodiphosphinate ligands: AACVD synthesis of nickel ditelluride. Dalton Transactions, 2008, , 7004.	3.3	27
48	Towards quantitatively reproducible substrates for SERS. Analyst, The, 2008, 133, 1449.	3.5	27
49	The poly(ethylene glycol) assisted preparation of NH4TiOF3 mesocrystals and their topotactic conversion to TiO2. Journal of Materials Chemistry, 2012, 22, 25123.	6.7	25
50	Metal-organic chemical vapor deposition of Î²-In2S3 thin films using a single-source approach. Journal of Materials Science: Materials in Electronics, 2003, 14, 555-557.	2.2	23
51	Cadmium Sulfide and Cadmium Phosphide Thin Films from a Single Cadmium Compound. Inorganic Chemistry, 2011, 50, 2052-2054.	4.0	22
52	Factors controlling material deposition in the CVD of nickel sulfides, selenides or phosphides from dichalcogenoimidodiphosphinato complexes: deposition, spectroscopic and computational studies. Dalton Transactions, 2010, 39, 6080.	3.3	21
53	Continuous Flow Supercritical Chemical Fluid Deposition of Optoelectronic Quality CdS. Advanced Materials, 2009, 21, 4115-4119.	21.0	20
54	Nanoparticles and Thin Films of Silver from Complexes of Derivatives of N-(Diisopropylthiophosphoryl)thioureas. Chemistry of Materials, 2009, 21, 4233-4240.	6.7	19

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55	Progression towards high efficiency perovskite solar cells via optimisation of the front electrode and blocking layer. Journal of Materials Chemistry C, 2016, 4, 11269-11277.	5.5	17
56	Surface-related properties of perovskite CH₃NH₃PbI₃ thin films by aerosol-assisted chemical vapour deposition. Journal of Materials Chemistry C, 2017, 5, 8366-8370.	5.5	16
57	Tantalum(v) diethylamide, [Ta(NEt2)5]: a potentially important and crystalline precursor for the CVD of oxides containing tantalum. Journal of Materials Chemistry, 2006, 16, 2226.	6.7	15
58	Optimised atmospheric pressure CVD of monoclinic VO2 thin films with picosecond phase transition. Surface and Coatings Technology, 2016, 287, 160-165.	4.8	15
59	Growth patterns and properties of aerosol-assisted chemical vapor deposition of CH3NH3PbI3 films in a single step. Surface and Coatings Technology, 2017, 321, 336-340.	4.8	15
60	Single molecular precursor for synthesis of GaAs nanoparticles. Materials Science and Technology, 2004, 20, 959-963.	1.6	13
61	Epitaxial CdTe Rods on Au/Si Islands from a Molecular Compound. Journal of the American Chemical Society, 2010, 132, 5964-5965.	13.7	13
62	Mixed ligand chelates of copper(II) with substituted diamines. Polyhedron, 2005, 24, 1101-1107.	2.2	12
63	Thiol-containing microspheres as polymeric ligands for the immobilisation of quantum dots. Journal of Materials Chemistry, 2009, 19, 215-221.	6.7	12
64	1 cm2 CH3NH3PbI3 mesoporous solar cells with 17.8% steady-state efficiency by tailoring front FTO electrodes. Journal of Materials Chemistry C, 2017, 5, 4946-4950.	5.5	12
65	Synthesis of novel mixed indium(III) chalcogenolato complexes: Potential precursors for indium chalcogenides. Polyhedron, 2006, 25, 864-868.	2.2	11
66	Investigation of New 2,5â€Dimethylpyrrolyl Titanium Alkylamide and Alkoxide Complexes as Precursors for the Liquid Injection MOCVD of TiO₂. Chemical Vapor Deposition, 2010, 16, 93-99.	1.3	11
67	Improved FTO/NiOx Interfaces for Inverted Planar Triple-Cation Perovskite Solar Cells. IEEE Journal of Photovoltaics, 2019, 9, 1302-1308.	2.5	10
68	Conducting ZnO thin films with an unusual morphology: Large flat microcrystals with (0001) facets perpendicular to the plane by chemical bath deposition. Materials Chemistry and Physics, 2011, 127, 174-178.	4.0	9
69	Aerosol-assisted CVD of cadmium diselenoimidodiphosphinate and formation of a new iPr2N2P3+ ion supported by combined DFT and mass spectrometric studies. Dalton Transactions, 2016, 45, 18603-18609.	3.3	9
70	Transparent Conductive Oxide Films for High-Performance Dye-Sensitized Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 518-524.	2.5	9
71	Crystal phase transition in LixNa1â^'xGdF4solid solution nanocrystals â€“ tuning of optical properties. Journal of Materials Chemistry C, 2014, 2, 9911-9917.	5.5	8
72	Translation Effects in Fluorine Doped Tin Oxide Thin Film Properties by Atmospheric Pressure Chemical Vapour Deposition. Coatings, 2016, 6, 43.	2.6	7

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73	The deposition of cadmium selenide and cadmium phosphide thin films from cadmium thioselenoimidodiphosphinate by AACVD and the formation of an aromatic species. Dalton Transactions, 2019, 48, 1436-1442.	3.3	7
74	Enhancement of the Photovoltaic Performance of Dye-Sensitized Solar Cells by Cosensitizing TiO2 Photoanode With Uncapped PbS Nanocrystals and Ruthenizer. IEEE Journal of Photovoltaics, 2018, 8, 512-516.	2.5	5
75	Optically tuned and large-grained bromine doped CH3NH3PbI3 perovskite thin films via aerosol-assisted chemical vapour deposition. Materials Chemistry and Physics, 2019, 223, 157-163.	4.0	5
76	catena-Poly[diethyl(2-hydroxyethyl)ammonium [[tetra-Î¼-acetato-Î²⁸O:Oâ€²-dicuprate(II)(Cuâ€”Cu)]-Î¼-acetato-Î²²O: dichloromethane solvate]. Acta Crystallographica Section E: Structure Reports Online, 2009, 65, m163-m164.	0.2	5
77	New Approach Towards The Deposition of I-III-VI Thin Films. Materials Research Society Symposia Proceedings, 2001, 692, 1.	0.1	4
78	Probing the growth mechanism of self-catalytic lead selenide wires. Journal of Materials Chemistry, 2012, 22, 12731.	6.7	3
79	Phenyl substituted ditelluro-imidodiphosphinate complexes of iron, nickel, palladium and platinum, and their pyrolysis studies generating metal tellurides. Polyhedron, 2019, 160, 157-162.	2.2	3
80	Metal-Organic Chemical Vapour Deposition of II-VI Semiconductor Thin Films Using Single-Source Approach. Materials Research Society Symposia Proceedings, 2002, 730, 1.	0.1	1
81	N-alkyldithiocarbamato complexes [Cd(S2CNHR)2] (R = C2H5, C4H9, C6H13, C12H25); Synthesis, Characterisation and Deposition of II/VI Nanoparticles.. Materials Research Society Symposia Proceedings, 2005, 879, 1.	0.1	1
82	Precursor Chemistry â€“ Main Group Metal Chalcogenides. , 2013, , 1001-1020.		1
83	Synthesis and structural characterisation of a new tantalum hydroxylamide dimer. Inorganic Chemistry Communication, 2014, 44, 180-182.	3.9	1
84	Understanding nanomechanical and surface ellipsometry of optical F-doped SnO2 thin films by in-line APCVD. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	2.3	1
85	Deposition of II/VI thin films from Novel Single-Source Precursors. Materials Research Society Symposia Proceedings, 2002, 744, 1.	0.1	0
86	Single-Source Approach for The Growth of I-III-VI Thin Films. Materials Research Society Symposia Proceedings, 2002, 730, 1.	0.1	0
87	A Novel Method for Synthesizing EuS Nanocrystals from a Single-Source Precursor under White LED Irradiation.. ChemInform, 2005, 36, no.	0.0	0
88	Single-Source Routes to Cobalt Sulfide and Manganese Sulfide Thin Films.. ChemInform, 2005, 36, no.	0.0	0
89	Deposition of TiO2 Films by Liquid Injection ALD using New Titanium 2,5-dimethylpyrrolyl Complexes. ECS Transactions, 2009, 25, 813-819.	0.5	0
90	Paramagnetic Crystalline Cobalt Selenide Materials via a Molecular Approach. , 2019, , .		0

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91	Comparing Lead Iodide and Lead Acetate Based Perovskite Absorber Layers by Aerosol-Assisted Chemical Vapor Deposition. , 2020, , .		0