

# Popatrao N Bhosale

## List of Publications by Year in descending order

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103  
papers

2,335  
citations

201674

27  
h-index

254184

43  
g-index

104  
all docs

104  
docs citations

104  
times ranked

2564  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis and characterization of Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films by SILAR method. <i>Journal of Physics and Chemistry of Solids</i> , 2012, 73, 735-740.	4.0	118
2	Novel synthesis of kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> nanoflakes by successive ionic layer adsorption and reaction technique: Characterization and application. <i>Electrochimica Acta</i> , 2012, 66, 216-221.	5.2	105
3	PbS quantum dot sensitized anatase TiO <sub>2</sub> nanocorals for quantum dot-sensitized solar cell applications. <i>Dalton Transactions</i> , 2012, 41, 6130.	3.3	82
4	Nanocoral architecture of TiO <sub>2</sub> by hydrothermal process: Synthesis and characterization. <i>Applied Surface Science</i> , 2011, 257, 9737-9746.	6.1	79
5	Eosin-Y and N3-Dye sensitized solar cells (DSSCs) based on novel nanocoral TiO <sub>2</sub> : A comparative study. <i>Electrochimica Acta</i> , 2012, 59, 113-120.	5.2	74
6	Nanobrick-like WO <sub>3</sub> thin films: Hydrothermal synthesis and electrochromic application. <i>Superlattices and Microstructures</i> , 2014, 73, 290-295.	3.1	74
7	Enhanced electrochromic coloration in Ag nanoparticle decorated WO <sub>3</sub> thin films. <i>Electrochimica Acta</i> , 2013, 102, 358-368.	5.2	73
8	Hydrothermal synthesis of rutile TiO <sub>2</sub> nanoflowers using Brønsted Acidic Ionic Liquid [BAIL]: Synthesis, characterization and growth mechanism. <i>CrystEngComm</i> , 2012, 14, 1920.	2.6	71
9	Hydrothermal synthesis of rutile TiO <sub>2</sub> with hierarchical microspheres and their characterization. <i>CrystEngComm</i> , 2011, 13, 6349.	2.6	69
10	High performing smart electrochromic device based on honeycomb nanostructured h-WO <sub>3</sub> thin films: hydrothermal assisted synthesis. <i>Dalton Transactions</i> , 2015, 44, 2788-2800.	3.3	69
11	Development of nanocoral-like Cd(SSe) thin films using an arrested precipitation technique and their application. <i>New Journal of Chemistry</i> , 2014, 38, 5964-5974.	2.8	62
12	Microwave-assisted rapid synthesis of highly porous TiO <sub>2</sub> thin films with nanocrystalline framework for efficient photoelectrochemical conversion. <i>Electrochimica Acta</i> , 2014, 143, 89-97.	5.2	48
13	UVA and solar light assisted photoelectrocatalytic degradation of AO7 dye in water using spray deposited TiO <sub>2</sub> thin films. <i>Applied Catalysis B: Environmental</i> , 2009, 89, 288-294.	20.2	47
14	Room temperature deposition of nanostructured Bi <sub>2</sub> Se <sub>3</sub> thin films for photoelectrochemical application: effect of chelating agents. <i>New Journal of Chemistry</i> , 2013, 37, 2821.	2.8	46
15	Growth mechanism and characterisation of chemically grown Sb doped Bi <sub>2</sub> Se <sub>3</sub> thin films. <i>Applied Surface Science</i> , 2008, 254, 5261-5265.	6.1	45
16	From nanocorals to nanorods to nanoflowers nanoarchitecture for efficient dye-sensitized solar cells at relatively low film thickness: All Hydrothermal Process. <i>Scientific Reports</i> , 2014, 4, 5451.	3.3	45
17	Novel microwave assisted sol-gel synthesis (MW-SGS) and electrochromic performance of petal like h-WO <sub>3</sub> thin films. <i>Materials Research Bulletin</i> , 2012, 47, 1787-1793.	5.2	44
18	Single step hydrothermal synthesis of hierarchical TiO <sub>2</sub> microflowers with radially assembled nanorods for enhanced photovoltaic performance. <i>RSC Advances</i> , 2014, 4, 47278-47286.	3.6	40

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19	Photoelectrocatalysis of Cefotaxime Using Nanostructured TiO <sub>2</sub> Photoanode: Identification of the Degradation Products and Determination of the Toxicity Level. <i>Industrial &amp; Engineering Chemistry Research</i> , 2014, 53, 18152-18162.	3.7	38
20	Development of dye sensitized TiO <sub>2</sub> thin films for efficient energy harvesting. <i>Journal of Alloys and Compounds</i> , 2019, 790, 1001-1013.	5.5	35
21	A facile and low cost strategy to synthesize Cd <sub>1-x</sub> Zn <sub>x</sub> Se thin films for photoelectrochemical performance: effect of zinc content. <i>RSC Advances</i> , 2015, 5, 55658-55668.	3.6	33
22	Effect of substrate on the nanostructured Bi <sub>2</sub> Se <sub>3</sub> thin films for solar cell applications. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 2385-2393.	2.2	33
23	Effect of Sb doping on thermoelectric properties of chemically deposited bismuth selenide films. <i>Materials Chemistry and Physics</i> , 2009, 115, 47-51.	4.0	32
24	Facile designing and assessment of photovoltaic performance of hydrothermally grown kesterite Cu <sub>2</sub> ZnSnS <sub>4</sub> thin films: Influence of deposition time. <i>Solar Energy</i> , 2020, 201, 102-115.	6.1	32
25	Efficient improvement of photoelectrochemical performance of CdSe thin film deposited via arrested precipitation technique. <i>Materials Letters</i> , 2016, 164, 52-55.	2.6	30
26	Development of RP-HPLC, Stability Indicating Method for Degradation Products of Linagliptin in Presence of Metformin HCl by Applying 2 Level Factorial Design; and Identification of Impurity-VII, VIII and IX and Synthesis of Impurity-VII. <i>Scientia Pharmaceutica</i> , 2017, 85, 25.	2.0	29
27	Microwave assisted synthesis, characterization and thermoelectric properties of nanocrystalline copper antimony selenide thin films. <i>RSC Advances</i> , 2014, 4, 51632-51639.	3.6	28
28	Langmuir-Blodgett self organized nanocrystalline tungsten oxide thin films for electrochromic performance. <i>RSC Advances</i> , 2015, 5, 26923-26931.	3.6	28
29	Efficient dye-sensitized solar cells based on hierarchical rutile TiO <sub>2</sub> microspheres. <i>CrystEngComm</i> , 2012, 14, 8156.	2.6	27
30	Simplistic construction of cadmium sulfoselenide thin films via a hybrid chemical process for enhanced photoelectrochemical performance. <i>RSC Advances</i> , 2015, 5, 40283-40296.	3.6	26
31	Designing of novel efficient photoactive ternary Zn <sub>1-x</sub> Cu <sub>2x</sub> Se thin film materials via hydrothermal route: Photoelectrochemical (PEC) cell study. <i>Materials Science in Semiconductor Processing</i> , 2020, 105, 104727.	4.0	26
32	Synthesis of SnS <sub>2</sub> thin film via non vacuum arrested precipitation technique for solar cell application. <i>Materials Letters</i> , 2016, 180, 23-26.	2.6	25
33	Optical and electrical studies on molybdenum sulphoselenide [Mo(S <sub>1-x</sub> Se <sub>x</sub> ) <sub>2</sub> ] thin films prepared by arrested precipitation technique (APT). <i>Solar Energy Materials and Solar Cells</i> , 2004, 81, 101-112.	6.2	24
34	Novel-approach for fabrication of CdS thin films for photoelectrochemical solar cell application. <i>Journal of Materials Science: Materials in Electronics</i> , 2014, 25, 5606-5617.	2.2	22
35	Double layer mesoscopic electron contact for efficient perovskite solar cells. <i>Sustainable Energy and Fuels</i> , 2020, 4, 843-851.	4.9	22
36	Electrical and optical properties of bismuth sulphotelluride (Bi <sub>2</sub> (S <sub>1-x</sub> Tex) <sub>3</sub> ) thin films prepared by arrested precipitation technique (APT). <i>Materials Chemistry and Physics</i> , 2003, 82, 534-537.	4.0	21

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37	Synthesis and characterization of new quaternary MoBiInSe <sub>5</sub> mixed metal chalcogenide thin films. <i>Journal of Alloys and Compounds</i> , 2010, 491, 321-324.	5.5	21
38	Thermoelectric properties of nanocrystalline Cu <sub>3</sub> SbSe <sub>4</sub> thin films deposited by a self-organized arrested precipitation technique. <i>New Journal of Chemistry</i> , 2015, 39, 5661-5668.	2.8	21
39	Photocurrent enhancement in a Cu <sub>2</sub> Cd(SSe) <sub>2</sub> photoanode synthesized via an arrested precipitation route. <i>New Journal of Chemistry</i> , 2016, 40, 3277-3288.	2.8	21
40	Surfactant assisted approach to development of efficient WO <sub>3</sub> photoanode for natural dye sensitized solar cell. <i>Solar Energy</i> , 2021, 220, 371-383.	6.1	21
41	Effect of surfactant on optical and structural properties of chemically deposited MoBi <sub>2</sub> S <sub>5</sub> thin films. <i>New Journal of Chemistry</i> , 2012, 36, 1807.	2.8	20
42	Development of RP UPLC-TOF/MS, stability indicating method for omeprazole and its related substances by applying two level factorial design; and identification and synthesis of non-pharmacopoeial impurities. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2016, 118, 370-379.	2.8	20
43	Synthesis of fibrous reticulate nanocrystalline n-type MoBi <sub>2</sub> (Se <sub>1-x</sub> Tex) <sub>5</sub> thin films: Thermocooling applications. <i>Materials Research Bulletin</i> , 2012, 47, 3860-3867.	5.2	19
44	Synthesis, characterization and photoelectrochemical properties of PbS sensitized vertically aligned ZnO nanorods: modified aqueous route. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 6897-6906.	2.2	19
45	Enhanced photoelectrochemical performance of novel p-type MoBiCuSe <sub>4</sub> thin films deposited by a simple surfactant-mediated solution route. <i>RSC Advances</i> , 2016, 6, 24985-24994.	3.6	19
46	Investigating the Role of Selenium-Ion Concentration on Optoelectronic Properties of the Cu <sub>2</sub> ZnSn(S <sub>1-x</sub> Se <sub>x</sub> ) <sub>4</sub> Thin Films. <i>Industrial &amp; Engineering Chemistry Research</i> , 2020, 59, 10868-10881.	3.7	19
47	Langmuir-Blodgett assembly of nanometric WO <sub>3</sub> thin film for electrochromic performance: A new way. <i>Materials Letters</i> , 2017, 194, 102-106.	2.6	18
48	Surfactant mediated synthesis of bismuth selenide thin films for photoelectrochemical solar cell applications. <i>Journal of Colloid and Interface Science</i> , 2018, 514, 250-261.	9.4	18
49	Morphologically controlled electrodeposition of fern shaped Bi <sub>2</sub> Te <sub>3</sub> thin films for photoelectrochemical performance. <i>Journal of Electroanalytical Chemistry</i> , 2015, 758, 178-190.	3.8	17
50	Growth of thin films by solution-gas interface: A new technique. <i>Materials Chemistry and Physics</i> , 1984, 11, 461-479.	4.0	16
51	Nanocrystalline MoBi <sub>2</sub> Se <sub>5</sub> Ternary Mixed Metal Chalcogenide Thin-films for Solar Cell Applications. , 2014, 6, 1285-1291.		16
52	Novel route for the synthesis of surfactant-assisted MoBi <sub>2</sub> (Se <sub>0.5</sub> Te <sub>0.5</sub> ) <sub>5</sub> thin films for solar cell applications. <i>New Journal of Chemistry</i> , 2015, 39, 3405-3416.	2.8	16
53	Electrical and optical properties of bismuth sulphotelluride [Bi <sub>2</sub> (S <sub>1-x</sub> Tex) <sub>3</sub> ] thin films prepared by arrested precipitation technique (APT). <i>Materials Chemistry and Physics</i> , 2004, 84, 247-250.	4.0	15
54	Influence of vacuum annealing on the structural and photoelectrochemical properties of nanocrystalline MoBi <sub>2</sub> S <sub>5</sub> thin films. <i>Current Applied Physics</i> , 2014, 14, 508-515.	2.4	15

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55	Synthesis and electrochromic application of surfactants tailored WO <sub>3</sub> nanostructures. Optical Materials, 2011, 34, 322-326.	3.6	14
56	Influence of deposition temperature on the optical, structural, morphological, compositional and photoelectrochemical properties of TiO <sub>2</sub> thin films. Journal of Materials Science: Materials in Electronics, 2016, 27, 11739-11750.	2.2	14
57	Effect of copper content on optostructural, morphological and photoelectrochemical properties of MoBi <sub>2</sub> x Cu x Se <sub>4</sub> thin films. Journal of Materials Science, 2013, 48, 7300-7311.	3.7	13
58	One-step hydrothermally assisted synthesis of CuZnSe thin film: photovoltaic application. Nanomaterials and Energy, 2020, 9, 1-7.	0.2	13
59	Multistep hydrothermal route for nanocoral architecture of anatase TiO <sub>2</sub> : synthesis and characterization of dye-sensitized solar cell performance. Progress in Photovoltaics: Research and Applications, 2014, 22, 525-539.	8.1	12
60	Low temperature and controlled synthesis of Bi <sub>2</sub> (S <sub>1-x</sub> Se <sub>x</sub> ) <sub>3</sub> thin films using a simple chemical route: effect of bath composition. RSC Advances, 2015, 5, 57090-57100.	3.6	12
61	Facile hydrothermal assisted synthesis of time dependent Cu <sub>2</sub> S thin films for efficient photoelectrochemical application. Journal of Materials Science: Materials in Electronics, 2018, 29, 19322-19335.	2.2	12
62	Deposition, characterizations and photoelectrochemical performance of nanocrystalline Cu-In-Cd-Se thin films by hybrid chemical process. Journal of Materials Science, 2017, 52, 9709-9727.	3.7	11
63	Novel hydrothermal route for synthesis of photoactive Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> nanocrystalline thin film: efficient photovoltaic performance. Journal of Materials Science: Materials in Electronics, 2020, 31, 5441-5451.	2.2	11
64	Optostructural and electrical studies on electrodeposited Indium doped ZrS <sub>2</sub> thin films. Journal of Alloys and Compounds, 2009, 474, 14-17.	5.5	10
65	Molybdenum Heteropolyoxometalate Thin Films for Solar Cell Applications. , 2014, 6, 1104-1109.		10
66	Bismuth Telluride quantum dot assisted Titanium Oxide microflowers for efficient photoelectrochemical performance. Materials Letters, 2015, 159, 177-181.	2.6	10
67	Optimization and comparative evaluation of optoelectronic properties of hydrothermally synthesized CdIn <sub>2</sub> Te <sub>4</sub> thin films: PEC performance. Materials Research Express, 2019, 6, 126404.	1.6	10
68	Chemical compositional analysis of semiconducting bismuth sulphoselenide thin films. Thin Solid Films, 2002, 414, 155-162.	1.8	9
69	Probing the role of deposition time in tuning the physico-chemical, optoelectronic performance of Cu <sub>2</sub> SnS <sub>3</sub> thin films. Materials Letters, 2019, 255, 126526.	2.6	9
70	Investigating the light harvesting capacity of sulfur ion concentration dependent SnS <sub>2</sub> thin films synthesized by self-assembled arrested precipitation technique. Materials Research Express, 2019, 6, 086467.	1.6	9
71	Novel hybrid solar cells based on I <sup>±</sup> -copper phthalocyanine-cadmium sulfide planar heterojunction. Journal of Materials Science, 2014, 49, 5100-5111.	3.7	8
72	Effect of indium(III) doping on chemosynthesized MoBi <sub>2</sub> Te <sub>5</sub> thin films and its photoresponse property. Journal of Materials Science: Materials in Electronics, 2015, 26, 2921-2930.	2.2	8

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73	Analytical Enantio-Separation of Linagliptin in Linagliptin and Metformin HCl Dosage Forms by Applying Two-Level Factorial Design. <i>Scientia Pharmaceutica</i> , 2016, 84, 671-684.	2.0	8
74	Synthesis and characterization of nanocrystalline MoBi <sub>2</sub> Te <sub>5</sub> thin films for photoelectrode applications. <i>Philosophical Magazine Letters</i> , 2012, 92, 563-571.	1.2	7
75	An approach towards TiO <sub>2</sub> chrysanthemum flowers with tunable properties: influence of reaction time in hydrothermal process. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 6119-6128.	2.2	7
76	Synthesis of (CdZn)Se thin films by a facile aqueous phase route and their photoelectrochemical performance for solar cell application. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 5867-5877.	2.2	7
77	A robust and self-assembled route to synthesis of CdZn(Se <sub>1-x</sub> Te <sub>x</sub> ) <sub>2</sub> photoanodes as light harvesters for photoelectrochemical solar cells. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 11763-11773.	2.2	7
78	Optoelectronic and Photovoltaic Properties of the Cu <sub>2</sub> ZnSnS <sub>4</sub> Photocathode by a Temperature-Dependent Facile Hydrothermal Route. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 7816-7825.	3.7	7
79	Novel synthetic route for the synthesis of ternary Cd(SSe) photoelectrode and their photoelectrochemical application. <i>Journal of Materials Science: Materials in Electronics</i> , 2017, 28, 2984-2995.	2.2	6
80	Synthesis of Bismuth Telluride Thin Film for Thermoelectric Application Via Electrodeposition Technique. <i>Macromolecular Symposia</i> , 2016, 361, 152-155.	0.7	5
81	Microwave assisted novel MoBi <sub>2</sub> S <sub>5</sub> nanoflowers: Synthesis, characterization, photoelectrochemical performance. <i>Solid State Sciences</i> , 2016, 61, 89-93.	3.2	5
82	Effect of molybdenum content on the optostructural, morphological and photoelectrochemical properties of Bi <sub>2</sub> Se <sub>3</sub> thin films. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	5
83	Effect of indium (III) content on photoelectrochemical performance of MoBi(2-x)In <sub>x</sub> S <sub>5</sub> thin films. <i>Solid State Sciences</i> , 2014, 35, 10-17.	3.2	4
84	Photoelectrochemical Performance of MoBiInSe <sub>5</sub> Mixed Metal Chalcogenide Thin Films. <i>Materials Today: Proceedings</i> , 2015, 2, 1458-1463.	1.8	4
85	Cesium doped H <sub>3</sub> PW <sub>12</sub> O <sub>40</sub> nanocrystalline thin films using single step hydrothermal route and its photoelectrochemical properties. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 18105-18119.	2.2	4
86	Novel Approach for Invention of Nubbly-Like Cd(SSe) Thin Film: Photoelectrochemical Application. <i>Macromolecular Symposia</i> , 2016, 362, 82-86.	0.7	3
87	Rapid Formation of Ternary CdZnSe <sub>2</sub> Chalcogenide Thin Film by Microwave Assisted Chemical Bath Deposition. <i>Macromolecular Symposia</i> , 2016, 362, 60-64.	0.7	3
88	Multinary CdZnIn <sub>2</sub> (SeTe) <sub>5</sub> thin films produced by arrested precipitation technique for photoelectrochemical solar cells. <i>Journal of Alloys and Compounds</i> , 2019, 787, 379-389.	5.5	3
89	Morphological engineering of novel nanocrystalline Cu <sub>2</sub> Sn(S,Se) <sub>3</sub> thin film through annealing temperature variation: Assessment of photoelectrochemical cell performance. <i>Materials Science in Semiconductor Processing</i> , 2020, 120, 105218.	4.0	3
90	Exploring the microstructural, optoelectronic properties of deposition time dependent Cu <sub>2</sub> Sn(S,Se) <sub>3</sub> thin film synthesized by non-vacuum arrested precipitation technique. <i>Superlattices and Microstructures</i> , 2021, 150, 106785.	3.1	3

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91	Single source precursor for vacuum evaporation of MoBi <sub>2</sub> Se <sub>5</sub> photoactive thin films. Journal of Materials Science: Materials in Electronics, 2015, 26, 2879-2886.	2.2	2
92	Single step fabrication of CuS thin film via hydrothermal route for solar cell application. AIP Conference Proceedings, 2018, , .	0.4	2
93	Investigating the photovoltaic performance of surfactant-assisted MoBi <sub>2</sub> Se <sub>5</sub> thin films. Nanomaterials and Energy, 2020, 9, 14-20.	0.2	2
94	Surfactant mediated morphological transition of TiO <sub>2</sub> thin films for enhanced photoconversion efficiency. Materials Today: Proceedings, 2021, 43, 2730-2737.	1.8	2
95	Optimization and comparative analysis of Cs ion intercalated H <sub>3</sub> PMO <sub>12</sub> O <sub>40</sub> photocathode: one-step hydrothermal strategy. Journal of Materials Science: Materials in Electronics, 2021, 32, 22921-22935.	2.2	2
96	Hydrothermally synthesized nanocrystalline photoactive SnS <sub>2</sub> thin films: effect of surface directing agents. New Journal of Chemistry, 2022, 46, 3277-3287.	2.8	2
97	An efficient Cu <sub>2</sub> Zn <sub>1</sub> In <sub>2</sub> Sn(S <sub>4</sub> ) <sub>4</sub> multicomponent photocathode <i>via</i> one-step hydrothermal approach for thin film solar cell. Journal of Materials Chemistry C, 2022, 10, 3447-3460.	5.5	2
98	Effect of annealing temperature on photoelectrochemical properties of nanocrystalline MoBi <sub>2</sub> (Se <sub>0.5</sub> Te <sub>0.5</sub> ) <sub>5</sub> thin films. Philosophical Magazine, 2014, 94, 3195-3205.	1.6	1
99	Surfactant-Mediated Growth of Nanostructured MoBi <sub>2</sub> Sn <sub>5</sub> Thin Films via Arrested Precipitation Technique. Advanced Science Letters, 2016, 22, 915-920.	0.2	1
100	Development of CdZn(SSe) <sub>2</sub> thin films by using simple aqueous chemical route: Air annealing. Materials Today: Proceedings, 2017, 4, 363-368.	1.8	0
101	Synthesis, characterization and application of nanocrystalline CdZn(SeTe) <sub>2</sub> thin films for energy application. AIP Conference Proceedings, 2018, , .	0.4	0
102	Photoelectrochemical (PEC) Investigation of Ga-Doped MoBi <sub>2</sub> Se <sub>5</sub> Thin Films Deposited by Arrested Precipitation Technique. Macromolecular Symposia, 2020, 393, 1900210.	0.7	0
103	One pot hydrothermal synthesis and characterization of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> nanocrystalline thin films: Photovoltaic performance. AIP Conference Proceedings, 2021, , .	0.4	0