

# Soumitra Satapathi

## List of Publications by Year in descending order

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83  
papers

1,853  
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236925

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330143

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84  
all docs

84  
docs citations

84  
times ranked

1687  
citing authors

#	ARTICLE	IF	CITATIONS
1	Is machine learning redefining the perovskite solar cells?. Journal of Energy Chemistry, 2022, 66, 74-90.	12.9	27
2	Recent Progress in Advanced Organic Photovoltaics: Emerging Techniques and Materials. ChemSusChem, 2022, 15, .	6.8	15
3	Thiocyanate-Passivated Diaminonaphthalene-Incorporated Dionâ€“Jacobson Perovskite for Highly Efficient and Stable Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 850-860.	8.0	22
4	Halide Perovskites in India. ACS Energy Letters, 2022, 7, 906-907.	17.4	2
5	Strain-Induced Band-Edge Modulation in Lead-Free Antimony-Based Double Perovskite for Visible-Light Absorption. ACS Applied Energy Materials, 2022, 5, 3926-3932.	5.1	10
6	Strategies to Enhance Light Emission from Two-Dimensional Perovskite Light-Emitting Diodes: Challenges and Future Opportunities. ACS Applied Electronic Materials, 2022, 4, 1469-1484.	4.3	8
7	Metal Halide Perovskite Heterojunction for Photocatalytic Hydrogen Generation: Progress and Future Opportunities. Advanced Materials Interfaces, 2022, 9, .	3.7	20
8	Influence of the A-site cation on hysteresis and ion migration in lead-free perovskite single crystals. Physical Review Materials, 2022, 6, .	2.4	13
9	Mixed Dimensional Perovskites Heterostructure for Highly Efficient and Stable Perovskite Solar Cells. Solar Rrl, 2022, 6, .	5.8	23
10	Recent Progress of Light Intensityâ€“Modulated Small Perturbation Techniques in Perovskite Solar Cells. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	6
11	3,6â€“Diaminocarbazole doped fluorescent electrospun nanofibers for highly sensitive detection of nitroaromatics. Journal of Applied Polymer Science, 2022, 139, .	2.6	4
12	Advance and prospect of metal-organic frameworks for perovskite photovoltaic devices. Organic Electronics, 2022, 106, 106546.	2.6	24
13	Investigation on the Facet-Dependent Anisotropy in Halide Perovskite Single Crystals. Journal of Physical Chemistry C, 2022, 126, 8906-8912.	3.1	7
14	Highly sensitive and selective detection of dopamine with boron and sulfur co-doped graphene quantum dots. Scientific Reports, 2022, 12, .	3.3	32
15	Efficient and Lessâ€“Toxic Indiumâ€“Doped MAPbI <sub>3</sub> Perovskite Solar Cells Prepared by Metal Alloying Technique. Solar Rrl, 2022, 6, .	5.8	6
16	Phonon-Mediated Slow Hot Carrier Dynamics in Lead-Free Cs <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> Perovskite Single Crystal. Journal of Physical Chemistry Letters, 2022, 13, 5260-5266.	4.6	12
17	Dielectric Relaxation and Polaron Hopping in Cs <sub>2</sub> AgBiBr <sub>6</sub> Halide Double Perovskites. Journal of Physical Chemistry C, 2022, 126, 10199-10208.	3.1	20
18	Highly Efficient and Stable 2D Dion Jacobson/3D Perovskite Heterojunction Solar Cells. ACS Applied Materials & Interfaces, 2022, 14, 29744-29753.	8.0	17

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19	Temperature-activated dielectric relaxation in lead-free halide perovskite single crystals. <i>Journal Physics D: Applied Physics</i> , 2022, 55, 415301.	2.8	4
20	Phonon-Assisted Reversible Thermo-chromism in a Lead-Free Antimony-Based Cs <sub>3</sub> Sb <sub>2</sub> Br <sub>9</sub> Perovskite. <i>ACS Applied Electronic Materials</i> , 2022, 4, 3440-3447.	4.3	5
21	Polaron-Mediated Photoconduction in Lead-Free Single-Crystalline Perovskite Thin-Film Devices. <i>Journal of Physical Chemistry C</i> , 2022, 126, 11165-11173.	3.1	11
22	Physiological Relevance of Angiotensin Converting Enzyme 2 As a Metabolic Linker and Therapeutic Implication of Mesenchymal Stem Cells in COVID-19 and Hypertension. <i>Stem Cell Reviews and Reports</i> , 2021, 17, 132-143.	3.8	7
23	Fluorescent Fe <sub>2</sub> O <sub>3</sub> -CdSe nanocomposite probe for selective detection and removal of picric acid. <i>Materials Chemistry and Physics</i> , 2021, 260, 124130.	4.0	9
24	Fabrication of Cysteamine capped-CdSe QDs anchored graphene xerogel nanosensor for facile onsite visual detection of TNT. <i>Nano Structures Nano Objects</i> , 2021, 25, 100643.	3.5	9
25	The effect of dimensionality on the charge carrier mobility of halide perovskites. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21551-21575.	10.3	49
26	Lewis Base Passivation of Quasi-2D Ruddlesden-Popper Perovskite for Order of Magnitude Photoluminescence Enhancement and Improved Stability. <i>ACS Applied Electronic Materials</i> , 2021, 3, 1572-1582.	4.3	38
27	Photosensitive Dielectric and Conductivity Relaxation in Lead-Free Cs <sub>3</sub> Bi <sub>2</sub> Cl <sub>9</sub> Perovskite Single Crystals. <i>Journal of Physical Chemistry C</i> , 2021, 125, 5243-5250.	3.1	34
28	Bandgap Engineering in a Staggered-Type Oxide Perovskite Heterojunction for Efficient Visible Light-Driven Photocatalytic Dye Degradation. <i>Langmuir</i> , 2021, 37, 3467-3476.	3.5	26
29	Dark Self-Healing-Mediated Negative Photoconductivity of a Lead-Free Cs <sub>3</sub> Bi <sub>2</sub> Cl <sub>9</sub> Perovskite Single Crystal. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 2286-2292.	4.6	51
30	Cation-Dependent Hot Carrier Cooling in the Lead-Free Bismuth Halide A <sub>3</sub> Bi <sub>2</sub> I <sub>9</sub> (A = FA, MA, and Cs) Perovskite. <i>Journal of Physical Chemistry C</i> , 2021, 125, 9891-9898.	3.1	32
31	Effect of sulfur-doped graphene quantum dots incorporation on morphological, optical and electron transport properties of CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> perovskite thin films. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 17406-17417.	2.2	17
32	Advances in Lead-Free Perovskite Single Crystals: Fundamentals and Applications. , 2021, 3, 1025-1080.		70
33	Observation of Negative Photoconductivity in Lead-Free Cs <sub>3</sub> Bi <sub>2</sub> Br <sub>9</sub> Perovskite Single Crystal. <i>ACS Photonics</i> , 2021, 8, 2473-2480.	6.6	36
34	Highly Sensitive Detection of Nitro Compounds Using a Fluorescent Copolymer-Based FRET System. <i>ACS Applied Polymer Materials</i> , 2021, 3, 4017-4026.	4.4	26
35	Low-frequency carrier kinetics in triple cation perovskite solar cells probed by impedance and modulus spectroscopy. <i>Electrochimica Acta</i> , 2021, 386, 138430.	5.2	33
36	Light-Emitting Perovskite Solar Cells: A Tale of Two States. <i>Energy Technology</i> , 2021, 9, 2100394.	3.8	0

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37	Impedance Spectroscopy for Metal Halide Perovskite Single Crystals: Recent Advances, Challenges, and Solutions. ACS Energy Letters, 2021, 6, 3275-3286.	17.4	47
38	Reversible Thermo-chromism in All-Inorganic Lead-Free Cs <sub>3</sub> Sb <sub>2</sub> I <sub>9</sub> Perovskite Single Crystals. Advanced Optical Materials, 2021, 9, 2101062.	7.3	26
39	Effect of bromine doping on the charge transfer, ion migration and stability of the single crystalline MAPb(Br <sub>x</sub> I <sub>1-x</sub> ) <sub>3</sub> photodetector. Journal of Materials Chemistry C, 2021, 9, 15189-15200.	5.5	23
40	Lead-free, stable mixed halide double perovskites Cs <sub>2</sub> AgBiBr <sub>6</sub> and Cs <sub>2</sub> AgBiBr <sub>6-x</sub> Cl <sub>x</sub> – A detailed theoretical and experimental study. Chemical Physics, 2020, 529, 110547.	1.9	38
41	A comprehensive review on synthesis and applications of single crystal perovskite halides. Progress in Solid State Chemistry, 2020, 60, 100286.	7.2	77
42	Structural Disorder and Spin Dynamics Study in Millimeter-Sized All-Inorganic Lead-Free Cesium Bismuth Halide Perovskite Single Crystals. ACS Applied Energy Materials, 2020, 3, 11732-11740.	5.1	48
43	The impact of Cs <sub>3</sub> Bi <sub>2</sub> Cl <sub>9</sub> single crystal growth modality on its symmetry and morphology. Journal of Materials Research and Technology, 2020, 9, 7149-7157.	5.8	39
44	Carbon-Based Adsorbents from Naturally Available Bermuda Grasses: Removal of TDS and Arsenic Ions. ChemistrySelect, 2020, 5, 7571-7580.	1.5	1
45	Poly-tryptophan/carbazole based FRET-system for sensitive detection of nitroaromatic explosives. Optical Materials, 2020, 100, 109710.	3.6	25
46	Recent progress in morphology optimization in perovskite solar cell. Journal of Materials Chemistry A, 2020, 8, 21356-21386.	10.3	159
47	Rapid removal of arsenic from water using metal oxide doped recyclable cross-linked chitosan cryogel. SN Applied Sciences, 2020, 2, 1.	2.9	18
48	Repurposing therapeutics for COVID-19: Rapid prediction of commercially available drugs through machine learning and docking. PLoS ONE, 2020, 15, e0241543.	2.5	52
49	A dual Turn-on/Turn-off FRET sensor for highly sensitive and selective detection of lead and methylene blue based on fluorescent dansyl tagged copolymer and small molecule diketopyrrolopyrrole. Polymer Testing, 2019, 79, 105997.	4.8	13
50	Graphene quantum dots and carbon nano dots for the FRET based detection of heavy metal ions. Nano Structures Nano Objects, 2019, 19, 100347.	3.5	45
51	Charge carrier dynamics study and morphology optimization in solvent annealed CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> perovskite for air processed stable solar cell application. Chemical Physics, 2019, 526, 110408.	1.9	17
52	Multimodal Fluorescent Polymer Sensor for Highly Sensitive Detection of Nitroaromatics. Scientific Reports, 2019, 9, 7269.	3.3	61
53	Morphological and photophysical study in hybrid ternary organic nanoparticles blends. Chemical Physics, 2019, 525, 110388.	1.9	2
54	Effect of size and charge asymmetry on aggregation kinetics of oppositely charged nanoparticles. Scientific Reports, 2019, 9, 3762.	3.3	23

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55	Design of a multimodal colloidal polymeric drug delivery vesicle: A detailed pharmaceutical study. Nano Structures Nano Objects, 2019, 18, 100245.	3.5	6
56	Ant-Wall model to study drug release from excipient matrix. Physica A: Statistical Mechanics and Its Applications, 2019, 519, 98-108.	2.6	6
57	Local Optoelectronic Characterization of Solvent-Annealed, Lead-Free, Bismuth-Based Perovskite Films. Langmuir, 2018, 34, 7647-7654.	3.5	30
58	Design of a novel FRET based fluorescent chemosensor and their application for highly sensitive detection of nitroaromatics. Sensors and Actuators B: Chemical, 2018, 255, 2628-2634.	7.8	55
59	Temperature Assisted Nucleation and Growth To Optimize Perovskite Morphology at Liquid Interface: A Study by Electrochemical Impedance Spectroscopy. ACS Applied Energy Materials, 2018, 1, 4420-4425.	5.1	19
60	Highly sensitive detection and removal of mercury ion using a multimodal nanosensor. Nano Structures Nano Objects, 2018, 16, 120-126.	3.5	33
61	Reusable graphene oxide nanofibers for enhanced photocatalytic activity: a detailed mechanistic study. Journal of Materials Science, 2017, 52, 5390-5403.	3.7	22
62	Systematic investigation and in vitro biocompatibility studies on implantable magnetic nanocomposites for hyperthermia treatment of osteoarthritic knee joints. Journal of Materials Science, 2017, 52, 9262-9268.	3.7	6
63	Effect of side groups on two-photon absorption of soluble polythiophenes. Spectroscopy Letters, 2017, 50, 375-380.	1.0	0
64	Utilization of Naturally Occurring Dyes as Sensitizers in Dye Sensitized Solar Cells. IEEE Journal of Photovoltaics, 2017, 7, 539-544.	2.5	38
65	Controlling morphology of $\text{CH}_3\text{NH}_3\text{PbI}_3$ perovskite nanocrystals. Nano Structures Nano Objects, 2017, 12, 106-112.		
66	Controllable Bulk Heterojunction Morphology by Self-Assembly of Oppositely Charged Nanoparticles. Journal of Physical Chemistry C, 2017, 121, 16045-16050.	3.1	3
67	Effect of functional groups on sensitization of dye-sensitized solar cells (DSSCs) using free base porphyrins. Journal of Porphyrins and Phthalocyanines, 2017, 21, 222-230.	0.8	9
68	Graphene-Based 3D Xerogel as Adsorbent for Removal of Heavy Metal Ions from Industrial Wastewater. Journal of Renewable Materials, 2017, 5, 96-102.	2.2	11
69	Photophysical study of P3HT/NDI based hybrid nanoparticles. European Physical Journal D, 2014, 68, 1.	1.3	3
70	Fluorescent Mueller matrix analysis of a highly scattering turbid media. Applied Physics Letters, 2014, 104, .	3.3	10
71	Two-photon active polymeric nanoparticles for high contrast in vitro imaging. RSC Advances, 2014, 4, 1116-1119.	3.6	1
72	Enhanced Sensory Response of Quaterthiophene Bearing 1,2,3-Triazole Moiety to Explosives. IEEE Sensors Journal, 2014, 14, 4334-4339.	4.7	11

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73	Synthesis of nanoparticles of P3HT and PCBM for optimizing morphology in polymeric solar cells. Applied Surface Science, 2014, 323, 13-18.	6.1	29
74	Performance enhancement of dye-sensitized solar cells by incorporating graphene sheets of various sizes. Applied Surface Science, 2014, 314, 638-641.	6.1	39
75	Synthesis of two-photon active cinnamoyl coumarins for high-contrast imaging of cancer cells and their photophysical characterization. Journal of Photochemistry and Photobiology A: Chemistry, 2014, 280, 39-45.	3.9	5
76	Two-Photon Active Nile Red Loaded Fluorescent Polystyrene Nanoparticles. Advanced Science Focus, 2013, 1, 3-5.	0.1	1
77	Sensitive Detection of Nitroaromatics With Colloidal Conjugated Polymer Nanoparticles. IEEE Sensors Journal, 2013, 13, 2329-2333.	4.7	11
78	Strong two-photon-induced fluorescence from a highly soluble polythiophene. Optics Communications, 2011, 284, 3612-3614.	2.1	12
79	Conjugated Polymer:TiO <sub>2</sub> Nanocomposite Solar Cells Based on P3HT Nanoparticles. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	0
80	Sensory Response and Two-Photon-Fluorescence Study of Regioregular Polythiophene Nanoparticles. Journal of Macromolecular Science - Pure and Applied Chemistry, 2011, 48, 1049-1054.	2.2	2
81	Biocatalytic Synthesis of Two-Photon Active Resveratrol Oligomer. Journal of Macromolecular Science - Pure and Applied Chemistry, 2011, 48, 1061-1066.	2.2	4
82	Synthesis and Characterization of a Thiophene Copolymer for Photovoltaic Application. Journal of Macromolecular Science - Pure and Applied Chemistry, 2011, 48, 1044-1048.	2.2	1
83	Fabrication of Dye-sensitized Solar Cells and Fluorescence Quenching Study Using Thiophene Based Copolymers. Journal of Macromolecular Science - Pure and Applied Chemistry, 2010, 47, 1180-1183.	2.2	16