

Abhijit Ray

List of Publications by Year in descending order

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124
papers

2,275
citations

218677

26
h-index

254184

43
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126
all docs

126
docs citations

126
times ranked

3179
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of copper pretreatment on optical and electrical properties of camphor-based graphene by chemical vapour deposition. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 8397-8408.	2.2	2
2	DC and DP polarographic studies to explore the intermediate species form and operating conditions effects on electrodeposition of Cu from Cu(II) in the presence of alizarin red S. <i>Chemical Papers</i> , 2022, 76, 1745.	2.2	1
3	Electrodeposited Ni-Mo Surface Alloy @ Ni-Foam for Electrocatalytic Hydrogen Generation in Acidic and Alkaline Media. <i>Journal of the Electrochemical Society</i> , 2022, 169, 056511.	2.9	6
4	Heterointerfaces of nickel sulphides and selenides on Ni-foam as efficient bifunctional electrocatalysts in acidic environments. <i>Journal of Materials Chemistry A</i> , 2022, 10, 12733-12746.	10.3	26
5	Hydrothermally grown MoS ₂ nanosheets under non-equilibrium condition and its electrocatalytic hydrogen evolution performance. <i>Journal of Materials Research</i> , 2022, 37, 1892-1903.	2.6	3
6	Fabrication of silicon nanohorns via soft lithography technique for photoelectrochemical application. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 16404-16413.	7.1	9
7	Photoelectrochemical characteristics of electrodeposited cuprous oxide with protective over layers for hydrogen evolution reactions. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 16431-16439.	7.1	17
8	A Systematic Investigation on Evaporation, Condensation and Production of Sustainable Water from Novel-Designed Tubular Solar Still. <i>Springer Proceedings in Energy</i> , 2021, , 1121-1130.	0.3	2
9	Articulating effect of low copper content on structure and optoelectronic properties of spray deposited Cu ₂ ZnSnS ₄ thin films “ From experiment and first-principles investigations. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 263, 114912.	3.5	6
10	Unravelling camphor mediated synthesis of TiO ₂ nanorods over shape memory alloy for efficient energy harvesting. <i>Applied Surface Science</i> , 2021, 541, 148489.	6.1	25
11	Cutting edge cleaning solution for PV modules. <i>Materials Today: Proceedings</i> , 2021, 39, 2005-2008.	1.8	6
12	Electrochemical-thermal modelling of commercially available cylindrical lithium-ion cells for the tropical climate of India. <i>Materials Today: Proceedings</i> , 2021, 47, 647-651.	1.8	3
13	Feasibility Study of Crude Oil Asphaltenes as Light-Harvesting Materials for Organic Photovoltaics: Light Absorption Characteristics of the Thin Film with P3HT. <i>Green Energy and Technology</i> , 2021, , 129-139.	0.6	2
14	Self-standing, hybrid three-dimensional-porous MoS ₂ /Ni ₃ S ₂ foam electrocatalyst for hydrogen evolution reaction in alkaline medium. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 7759-7771.	7.1	31
15	Effect of Azimuth and Tilt Angle on Ideally Designed Rooftop Solar PV Plant for Energy Generation. , 2021, , .		3
16	Effect of Temperature on Conversion Efficiency of Single-Phase Solar PV Inverter. , 2021, , .		3
17	Nanogrids in India: A conceptual solution for off grid/rural electrification. , 2021, , .		1
18	Performance comparison of crystalline and thin film PV Technology: Observations at Utility scale Solar PV Plants under A high solar resource in western India. , 2021, , .		0

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19	Multiple MPPT based String Inverter effect on Annual performance: Observations at Utility scale Solar PV Plants. , 2021, , .		1
20	Techno-Economic-Environment Analysis of Solar PV Smart Microgrid for Sustainable Rural Electrification in Agriculture community. , 2021, , .		3
21	Snail Trail Impact on Rooftop Solar PV Plant Energy Generation. , 2021, , .		1
22	SnS and SnS ₂ films by direct-coating from same molecular ink. Materials Science in Semiconductor Processing, 2021, 131, 105852.	4.0	5
23	Reviewâ€™Inorganic Solid State Electrolytes: Insights on Current and Future Scope. Journal of the Electrochemical Society, 2021, 168, 080536.	2.9	11
24	Pseudocapacitive Energy Storage in Copper Oxide and Hydroxide Nanostructures Casted Over Nickel-Foam. Springer Proceedings in Energy, 2021, , 1383-1391.	0.3	3
25	Novel Design of PV Integrated Solar Still for Cogeneration of Power and Sustainable Water Using PVT Technology. Springer Proceedings in Energy, 2021, , 1131-1143.	0.3	2
26	Effect of Doping Concentration on Grain Boundary Conductivity of Samaria Doped Ceria Composites. Journal of the Electrochemical Society, 2021, 168, 124515.	2.9	1
27	Controlled etching of silica nanospheres monolayer for template application: A systematic study. Applied Surface Science, 2020, 500, 144050.	6.1	14
28	Growth of titanium dioxide nanorod over shape memory material using chemical vapor deposition for energy conversion application. Materials Today: Proceedings, 2020, 28, 475-479.	1.8	30
29	Role of nanowire length on the performance of a self-driven NIR photodetector based on mono/bi-layer graphene (camphor)/Si-nanowire Schottky junction. Nanotechnology, 2020, 31, 225208.	2.6	13
30	Investigation of spray pyrolyzed copper oxide as a photocathode in photoelectrochemical energy conversion. Materials Today: Proceedings, 2020, 28, 883-887.	1.8	5
31	Comparative study of heat transfer characteristics of a tube equipped with X-shaped and twisted tape insert. Materials Today: Proceedings, 2020, 28, 1175-1180.	1.8	10
32	Economic Modeling of Deviation Settlement under Solar Forecasting and Scheduling. , 2020, , .		0
33	Temperature Effects on DC Cable Voltage Drop in Utility Scale Rooftop Solar PV Plant Based on Empirical Model. , 2020, , .		1
34	Exploring Technical and Economic Feasibility of a Stand-Alone Solar PV Based DC Distribution System Over AC for Use in Houses. , 2020, , .		2
35	Performance Analysis of String and Central Inverter based Ideally Designed Utility scale Solar PV Plant. , 2020, , .		8
36	Annual performance of Multiple MPPT based String Inverter under Partial Shadowing: Observations at Utility scale Solar PV Plants. , 2020, , .		5

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37	Low temperature-controlled synthesis of hierarchical Cu ₂ O/Cu(OH) ₂ /CuO nanostructures for energy applications. <i>Journal of Materials Research</i> , 2019, 34, 3173-3185.	2.6	31
38	Controlled Island Formation of Large-Area Graphene Sheets by Atmospheric Chemical Vapor Deposition: Role of Natural Camphor. <i>ACS Omega</i> , 2019, 4, 8758-8766.	3.5	15
39	Broadband photoresponse data of transparent all-oxide photovoltaics of ZnO/NiO. <i>Data in Brief</i> , 2019, 25, 104095.	1.0	1
40	Solar to chemical energy conversion using titania nanorod photoanodes augmented by size distribution of plasmonic Au-nanoparticle. <i>Materials Chemistry and Physics</i> , 2019, 231, 322-334.	4.0	8
41	Transition Metal Dichalcogenide Anchored in 3D Nickel Framework with Graphene Support for Efficient Electrocatalytic Hydrogen Evolution. <i>Advanced Sustainable Systems</i> , 2019, 3, 1800168.	5.3	12
42	Development of highly sensitive H ₂ O ₂ redox sensor from electrodeposited tellurium nanoparticles using ionic liquid. <i>Biosensors and Bioelectronics</i> , 2019, 132, 319-325.	10.1	24
43	Transparent all-oxide photovoltaics and broadband high-speed energy-efficient optoelectronics. <i>Solar Energy Materials and Solar Cells</i> , 2019, 194, 148-158.	6.2	25
44	The Effect of Substrate Temperature on the Phase Formation of Spray-Pyrolysed Ternary Cu ₂ SnS ₃ for Thin-Film Solar Cells. <i>Transactions of the Indian Institute of Metals</i> , 2019, 72, 1675-1678.	1.5	2
45	Effective light polarization insensitive and omnidirectional properties of Si nanowire arrays developed on different crystallographic planes. <i>Nanotechnology</i> , 2019, 30, 124002.	2.6	14
46	A solid carbon source based high performance mono/bi layer graphene/SiNWs heterojunction NIR photodetector. , 2019, , .		1
47	Highly phase-pure spray-pyrolysed Cu ₂ SnS ₃ thin films prepared by hybrid thermal treatment for photovoltaic applications. <i>Journal of Alloys and Compounds</i> , 2018, 745, 347-354.	5.5	22
48	Neutrophil-to-lymphocyte Ratio (NLR) as a predictor for recurrence in patients with stage III melanoma. <i>Scientific Reports</i> , 2018, 8, 4044.	3.3	53
49	Effect of annealing atmosphere on microstructure, optical and electronic properties of spray-pyrolysed In-doped Zn(O,S) thin films. <i>Bulletin of Materials Science</i> , 2018, 41, 1.	1.7	3
50	Effective Photocurrent Enhancement in Nanostructured CuO by Organic Dye Sensitization: Studies on Charge Transfer Kinetics. <i>Journal of Physical Chemistry C</i> , 2018, 122, 3690-3699.	3.1	15
51	Quantum mechanical investigation of optoelectronic properties of gold nanoparticle attached titanium dioxide nanorods for device applications. <i>Journal of Nanoparticle Research</i> , 2018, 20, 1.	1.9	5
52	Direct-coated copper nickel tin sulphide (Cu ₂ NiSnS ₄) thin films from molecular ink. <i>Materials Letters</i> , 2018, 215, 118-120.	2.6	15
53	Electrical properties modulation in spray pyrolysed Cu ₂ SnS ₃ thin films through variation of copper precursor concentration for photovoltaic application. <i>Journal of Analytical and Applied Pyrolysis</i> , 2018, 136, 35-43.	5.5	13
54	Effect of vacuum and sulphur annealing on the structural properties of spray deposited Cu ₂ SnS ₃ thin films. <i>Vacuum</i> , 2018, 158, 263-270.	3.5	17

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55	Synthesis and characterization of spray deposited CZTS thin films for photo-electrochemical application. AIP Conference Proceedings, 2018, , .	0.4	4
56	Solid-solution Zn(O,S) thin films: Potential alternative buffer layer for Cu ₂ ZnSnS ₄ solar cells. AIP Conference Proceedings, 2018, , .	0.4	0
57	SnS ₂ films deposited from molecular ink as Cd-free alternative buffer layer for solar cells. AIP Conference Proceedings, 2018, , .	0.4	7
58	Spray pyrolyzed Cu ₂ SnS ₃ thin films for photovoltaic application. AIP Conference Proceedings, 2018, , .	0.4	2
59	Effect of annealing temperature on the PEC performance of electrodeposited copper oxides. AIP Conference Proceedings, 2018, , .	0.4	2
60	Achieving sub-50nm controlled diameter of aperiodic Si nanowire arrays by ultrasonic catalyst removal for photonic applications. AIP Conference Proceedings, 2018, , .	0.4	0
61	Inexpensive Cu ₂ SnS ₃ grown by room-temperature aqueous bath electrodeposition for thin film solar cells. International Journal of Modern Physics B, 2018, 32, 1840071.	2.0	2
62	Effect of growth temperature and precursor concentration on synthesis of CVD-graphene from camphor. AIP Conference Proceedings, 2018, , .	0.4	1
63	TiO ₂ nanorods thin-films embedded with gold nanoparticles for enhanced photocatalytic activity. AIP Conference Proceedings, 2018, , .	0.4	0
64	Preparation and characterization of Cu ₂ SnS ₃ thin films by electrodeposition. AIP Conference Proceedings, 2018, , .	0.4	5
65	Determining the confined optical length of high index vertical Si nanoforest arrays for photonic applications. Journal of Applied Physics, 2018, 123, .	2.5	6
66	Electrodeposition of Si from an Ionic Liquid Bath at Room Temperature in the Presence of Water. Langmuir, 2017, 33, 1599-1604.	3.5	18
67	Optimization of photoelectrochemical performance in chemical bath deposited nanostructured CuO. Journal of Alloys and Compounds, 2017, 695, 3655-3665.	5.5	33
68	First-principles study of electronic and optical properties of solid-solution ZnO _{1-x} S _x . International Journal of Modern Physics B, 2017, 31, 1750175.	2.0	2
69	Reinforcement of Zn(O,S) buffer layer for efficient band matching in a kesterite (Cu ₂ ZnSnS ₄) solar cell and its analysis using simulation tool for the application in energy harvesting. AIP Conference Proceedings, 2017, , .	0.4	1
70	Strong light absorption capability directed by structured profile of vertical Si nanowires. Optical Materials, 2017, 73, 449-458.	3.6	16
71	Sample preparation and electrochemical data of Co ₃ O ₄ working electrode for seawater splitting. Data in Brief, 2017, 14, 68-72.	1.0	4
72	Photoelectrocatalytic sea water splitting using Kirkendall diffusion grown functional Co ₃ O ₄ film. Solar Energy Materials and Solar Cells, 2017, 171, 267-274.	6.2	39

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73	Structure, optical and electronic properties of solid solution Zn(O,S) thin films and the effect of annealing. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	2.3	6
74	Titanium dioxide nanorod diameter and layer porosity optimization by estimating electrical performance of dye and perovskite sensitized solar cell. Journal of Porous Materials, 2017, 24, 217-231.	2.6	6
75	A phase I trial of azacitidine and nanoparticle albumin bound paclitaxel in patients with advanced or metastatic solid tumors. Oncotarget, 2017, 8, 52413-52419.	1.8	21
76	Investigating the Band Alignment of Zn(O, S) with Kesterite (Cu ₂ ZnSnS ₄) Material for Photovoltaic Application. Journal of Nano- and Electronic Physics, 2017, 9, 03007-1-03007-4.	0.5	0
77	A phase I study of intratumoral ipilimumab and interleukin-2 in patients with advanced melanoma. Oncotarget, 2016, 7, 64390-64399.	1.8	60
78	Highly Photoactive and Photo-Stable Spray Pyrolyzed Tenorite CuO Thin Films for Photoelectrochemical Energy Conversion. Journal of the Electrochemical Society, 2016, 163, H1195-H1203.	2.9	25
79	Fabrication and characterization of GaN/InGaN MQW solar cells. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	5
80	Thermally Stable Silver Nanowires-Embedding Metal Oxide for Schottky Junction Solar Cells. ACS Applied Materials & Interfaces, 2016, 8, 8662-8669.	8.0	34
81	Facile, Noncyanide Based Etching of Spray Deposited Cu ₂ ZnSnS ₄ Thin Films for Secondary Phase Removal. ACS Sustainable Chemistry and Engineering, 2016, 4, 2302-2308.	6.7	31
82	Nanostructured SnS with inherent anisotropic optical properties for high photoactivity. Nanoscale, 2016, 8, 2293-2303.	5.6	123
83	Effect of initial bath condition and post-annealing on co-electrodeposition of Cu ₂ ZnSnS ₄ . Materials Chemistry and Physics, 2016, 171, 63-72.	4.0	21
84	Effect of Annealing on Structural Properties of Electrodeposited CZTS Thin Films. IETE Technical Review (Institution of Electronics and Telecommunication Engineers, India), 2016, 33, 2-6.	3.2	12
85	p-GaN/i-In _x Ga _{1-x} N/n-GaN solar cell with indium compositional grading. Optical and Quantum Electronics, 2015, 47, 1117-1126.	3.3	5
86	Metal/InGaN Schottky junction solar cells: an analytical approach. Applied Physics A: Materials Science and Processing, 2015, 118, 1459-1468.	2.3	13
87	Time optimization of instruction execution in FPGA using embedded systems. , 2015, , .		1
88	Effects of Heating Temperature and Duration by Gold Nanorod Mediated Plasmonic Photothermal Therapy on Copolymer Accumulation in Tumor Tissue. Molecular Pharmaceutics, 2015, 12, 1605-1614.	4.6	17
89	Junction and Back Contact Properties of Spray-Deposited M/SnS/In ₂ S ₃ /SnO ₂ :F/Glass (M=Ag, Cu, Graphite) Devices: Considerations to Improve Photovoltaic Performance. Journal of Electronic Materials, 2015, 44, 558-567.	2.2	6
90	Molar optimization of spray pyrolyzed SnS thin films for photoelectrochemical applications. Journal of Alloys and Compounds, 2015, 619, 458-463.	5.5	35

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91	Theoretical analysis of a Pico-hydro power system for energy generation in rural or isolated area. , 2014, , .		15
92	Gold nanorod-mediated hyperthermia enhances the efficacy of HPMA copolymer-90Y conjugates in treatment of prostate tumors. Nuclear Medicine and Biology, 2014, 41, 282-289.	0.6	44
93	In Vitro Evaluation of HPMA-Copolymers Targeted to HER2 Expressing Pancreatic Tumor Cells for Image Guided Drug Delivery. Macromolecular Bioscience, 2014, 14, 92-99.	4.1	4
94	Magnetron sputtered Cu doped SnS thin films for improved photoelectrochemical and heterojunction solar cells. RSC Advances, 2014, 4, 39343-39350.	3.6	52
95	Evaluation of Back Contact in Spray Deposited SnS Thin Film Solar Cells by Impedance Analysis. ACS Applied Materials & Interfaces, 2014, 6, 10099-10106.	8.0	36
96	Annealing influence over structural and optical properties of sprayed SnS thin films. Optical Materials, 2013, 35, 1693-1699.	3.6	60
97	Biodegradable multiblock poly(N-2-hydroxypropyl)methacrylamide gemcitabine and paclitaxel conjugates for ovarian cancer cell combination treatment. International Journal of Pharmaceutics, 2013, 454, 435-443.	5.2	48
98	A study on the 2D simulation of Pt/InGaN/GaN/metal Schottky junction solar cell. Semiconductor Science and Technology, 2013, 28, 055012.	2.0	6
99	Plasmonic photothermal therapy increases the tumor mass penetration of HPMA copolymers. Journal of Controlled Release, 2013, 166, 130-138.	9.9	59
100	Theoretical study on the effect of graded In _x Ga _{1-x} N layer on p-GaN/In _x Ga _{1-x} N/n-GaN p-i-n solar cell. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2656-2661.	1.8	5
101	Overcoming the stromal barrier for targeted delivery of HPMA copolymers to pancreatic tumors. International Journal of Pharmaceutics, 2013, 456, 202-211.	5.2	28
102	Study of the junction and carrier lifetime properties of a spray-deposited CZTS thin-film solar cell. Semiconductor Science and Technology, 2013, 28, 055001.	2.0	31
103	Theoretical simulation of photovoltaic response of graphene-on-semiconductors. Applied Physics A: Materials Science and Processing, 2013, 111, 1159-1163.	2.3	16
104	Evidence of Oral Translocation of Anionic G6.5 Dendrimers in Mice. Molecular Pharmaceutics, 2013, 10, 988-998.	4.6	26
105	Influence of optical properties of ZnO thin-films deposited by spray pyrolysis and RF magnetron sputtering on the output performance of silicon solar cell. IOP Conference Series: Materials Science and Engineering, 2013, 43, 012002.	0.6	3
106	Guided delivery of polymer therapeutics using plasmonic photothermal therapy. Nano Today, 2012, 7, 158-167.	11.9	107
107	Structural, optical and electrical properties of spray-deposited CZTS thin films under a non-equilibrium growth condition. Journal Physics D: Applied Physics, 2012, 45, 445103.	2.8	144
108	The effect of indium composition on open-circuit voltage of InGaN thin-film solar cell: An analytical and computer simulation study. , 2012, , .		2

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109	Size and surface charge significantly influence the toxicity of silica and dendritic nanoparticles. <i>Nanotoxicology</i> , 2012, 6, 713-723.	3.0	145
110	Enhancement of output performance of Cu ₂ ZnSnS ₄ thin film solar cells – A numerical simulation approach and comparison to experiments. <i>Physica B: Condensed Matter</i> , 2012, 407, 4391-4397.	2.7	134
111	A study of the applicability of ZnO thin-films as anti-reflection coating on Cu ₂ ZnSnS ₄ thin-films solar cell. <i>AIP Conference Proceedings</i> , 2012, , .	0.4	2
112	Comparison of Active and Passive Targeting of Docetaxel for Prostate Cancer Therapy by HPMA Copolymer – RGDFK Conjugates. <i>Molecular Pharmaceutics</i> , 2011, 8, 1090-1099.	4.6	56
113	Anticancer and antiangiogenic activity of HPMA copolymer-aminohexylgeldanamycin-RGDFK conjugates for prostate cancer therapy. <i>Journal of Controlled Release</i> , 2011, 151, 263-270.	9.9	40
114	Simulation of IPV effect in In-doped c-Si with optimized indium concentration and layer thickness. <i>Physica B: Condensed Matter</i> , 2011, 406, 4221-4226.	2.7	12
115	PAMAM-Camptothecin Conjugate Inhibits Proliferation and Induces Nuclear Fragmentation in Colorectal Carcinoma Cells. <i>Pharmaceutical Research</i> , 2010, 27, 2307-2316.	3.5	47
116	Utilization of discrete event simulation in the prospective determination of optimal cardiovascular lab processes. , 2009, , .		2
117	Annealing time dependence of electrical resistivity and magneto-resistance of La _{0.6} Y _{0.07} Ca _{0.33} MnO ₃ pellets prepared by – pyrophoric – method. <i>Journal of Magnetism and Magnetic Materials</i> , 2003, 266, 268-277.	2.3	14
118	Thermal conductivity of La _{0.67} (Ca _x Sr _{1-x}) _{0.33} MnO ₃ (x=0, 0.5, 1) and La _{0.6} Y _{0.07} Ca _{0.33} MnO ₃ pellets between 10 and 300K. <i>Solid State Communications</i> , 2003, 126, 147-152.	1.9	15
119	Low Field Second Harmonic Response and AC Susceptibility of (Bi,Pb)-2223 Pellet in a Generalized Critical State Model. <i>International Journal of Modern Physics B</i> , 2003, 17, 3831-3846.	2.0	3
120	Estimation of non-linear effective flux diffusion barrier U(J, H _d , T) and critical current density of polycrystalline (Bi – Pb)-2223 using ac susceptibility measurements. <i>Materials Research Bulletin</i> , 2002, 37, 833-839.	5.2	13
121	Non-destructive evaluation of defects in ferromagnetic plates using a sensitive magnetic sensor based on second harmonic response of superconducting Bi _{1.6} Pb _{0.4} Sr ₄ Ca ₂ Cu ₃ O ₁₀ +I ⁺ pellet. <i>Bulletin of Materials Science</i> , 2002, 25, 101-107.	1.7	1
122	A novel method for sensing rotational speed, linear displacement and current using superconducting BPSCCO magnetic sensor. <i>Bulletin of Materials Science</i> , 2002, 25, 463-467.	1.7	1
123	A sensitive magnetic field sensor using BPSCCO thick film. <i>Bulletin of Materials Science</i> , 2001, 24, 385-388.	1.7	1
124	A powerful approach to develop nitrogen-doped graphene sheets: theoretical and experimental framework. <i>Journal of Materials Science</i> , 0, , .	3.7	3