Vinay Gupta

List of Publications by Year in descending order

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81 papers	6,816 citations	109137 35 h-index	64668 79 g-index
83 all docs	83 docs citations	83 times ranked	9226 citing authors

#	Article	IF	Citations
1	Comparative study of PTB7:PC71BM based polymer solar cells fabricated under different working environments. Microsystem Technologies, 2022, 28, 269-274.	1.2	6
2	Engineered Cathode Buffer Layers for Highly Efficient Organic Solar Cells: A Review. Advanced Materials Interfaces, 2022, 9, .	1.9	21
3	Enhanced photosensitive properties of a single-crystal formamidinium lead bromide iodine (FAPbBr₂I) based photodetector. Materials Advances, 2022, 3, 2089-2095.	2.6	11
4	Downâ€conversion materials for organic solar cells: Progress, challenges, and perspectives. Aggregate, 2022, 3, .	5.2	27
5	Downconversion Materials for Perovskite Solar Cells. Solar Rrl, 2022, 6, .	3.1	18
6	Graphene quantum dots decorated on spinel nickel cobaltite nanocomposites for boosting supercapacitor electrode material performance. Journal of Alloys and Compounds, 2021, 876, 159990.	2.8	59
7	Eu doped NaYF4@Er:TiO2 nanoparticles for tunable ultraviolet light based anti-counterfeiting applications. Microsystem Technologies, 2020, , 1.	1.2	19
8	A comprehensive review on synthesis and applications of single crystal perovskite halides. Progress in Solid State Chemistry, 2020, 60, 100286.	3.9	77
9	Realization of Inverted Organic Solar Cells by Using Sol-Gel Synthesized ZnO/Y₂O₃ Core/Shell Nanoparticles as Electron Transport Layer. IEEE Journal of Photovoltaics, 2020, 10, 1744-1749.	1.5	15
10	Room temperature synthesis of perovskite (MAPbI3) single crystal by anti-solvent assisted inverse temperature crystallization method. Journal of Crystal Growth, 2020, 537, 125598.	0.7	18
11	Performance enhancement of conjugated polymer-small molecule-non fullerene ternary organic solar cells by tuning recombination kinetics and molecular ordering. Solar Energy, 2020, 201, 499-507.	2.9	21
12	An efficient pseudocapacitor electrode material with co-doping of iron (II) and sulfur in luminescent graphene quantum dots. Diamond and Related Materials, 2020, 107, 107913.	1.8	50
13	Application of small molecules based on a dithienogermole core in bulk heterojunction organic solar cells and perovskite solar cells. Materials Chemistry Frontiers, 2020, 4, 2168-2175.	3.2	8
14	Dual-functional cathode buffer layer for power conversion efficiency enhancement of bulk-heterojunction solar cells. Synthetic Metals, 2019, 255, 116112.	2.1	5
15	Potential Substitutes for Replacement of Lead in Perovskite Solar Cells: A Review. Global Challenges, 2019, 3, 1900050.	1.8	115
16	Impact of Aâ€“Dâ€“Aâ€Structured Dithienosiloleâ€and Phenoxazineâ€Based Small Molecular Material for Bulk Heterojunction and Dopantâ€Free Perovskite Solar Cells. Chemistry - A European Journal, 2019, 25, 16320-16327.	1.7	11
17	MnO2/SWCNT buckypaper for high performance supercapacitors. Journal of Energy Storage, 2019, 26, 100960.	3.9	9
18	Effectiveness of Solvent Vapor Annealing over Thermal Annealing on the Photovoltaic Performance of Non-Fullerene Acceptor Based BHJ Solar Cells. Scientific Reports, 2019, 9, 8529.	1.6	31

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19	FÃ¶rster resonance energy transfer in p-DTS(FBTTh2)2- p-SIDT(FBTTh2)2 small molecule ternary blend bulk-heterojunction solar cells for enhanced power conversion efficiency. Materials Letters, 2019, 251, 122-125.	1.3	8
20	Cu2S nanocrystals incorporated highly efficient non-fullerene ternary organic solar cells. Current Applied Physics, 2019, 19, 394-399.	1.1	8
21	Highly Efficient Benzo-Furan-Based Electron Acceptor Derived from One-Pot Synthesis for High-Performance Bulk Heterojunction Solar Cells. ACS Applied Energy Materials, 2019, 2, 1019-1025.	2.5	3
22	Impact of rotamer diversity on the self-assembly of nearly isostructural molecular semiconductors. Journal of Materials Chemistry A, 2018, 6, 383-394.	5.2	18
23	Dâ^Ï€â€“Aâ^Ï€â€“D Structured Diketopyrrolopyrrole-Based Electron Donors for Solution-Processed Organic Solar Cells. ACS Omega, 2018, 3, 13365-13373.	1.6	19
24	Charge carrier dynamics in PffBT4T-2OD: PCBM organic solar cells. Organic Electronics, 2018, 62, 441-447.	1.4	14
25	A highly efficient PTB7-Th polymer donor bulk hetero-junction solar cell with increased open circuit voltage using fullerene acceptor CN-PC70BM. Organic Electronics, 2017, 43, 262-267.	1.4	13
26	Ga-doped ZnO as an electron transport layer for PffBT4T-2OD: PC70BM organic solar cells. Organic Electronics, 2017, 43, 207-213.	1.4	27
27	Molecular Engineering of Highly Efficient Small Molecule Nonfullerene Acceptor for Organic Solar Cells. Advanced Functional Materials, 2017, 27, 1603820.	7.8	53
28	Improved hole mobility and suppressed trap density in polymer-polymer dual donor based highly efficient organic solar cells. Applied Physics Letters, 2016, 108, .	1.5	21
29	Luminescent GdVO4:Sm3+ quantum dots enhance power conversion efficiency of bulk heterojunction polymer solar cells by FÃ¶rster resonance energy transfer. Applied Physics Letters, 2016, 109, .	1.5	12
30	Highly Directional 1D Supramolecular Assembly of New Diketopyrrolopyrrole-Based Gel for Organic Solar Cell Applications. Langmuir, 2016, 32, 4346-4351.	1.6	48
31	Photo-physics of PTB7, PCBM and ICBA based ternary solar cells. Organic Electronics, 2016, 34, 111-117.	1.4	46
32	Luminescent cathode buffer layer for enhanced power conversion efficiency and stability of bulk-heterojunction solar cells. Organic Electronics, 2016, 38, 193-199.	1.4	7
33	High-Performance Non-Fullerene Acceptor Derived from Diathiafulvalene Wings for Solution-Processed Organic Photovoltaics. Journal of Physical Chemistry C, 2016, 120, 24615-24622.	1.5	21
34	An Organic Dyad Composed of Diathiafulvaleneâ€Functionalized Diketopyrrolopyrroleâ€“Fullerene for Singleâ€Component Highâ€Efficiency Organic Solar Cells. Angewandte Chemie - International Edition, 2016, 55, 12334-12337.	7.2	56
35	An Organic Dyad Composed of Diathiafulvaleneâ€Functionalized Diketopyrrolopyrroleâ€“Fullerene for Singleâ€Component Highâ€Efficiency Organic Solar Cells. Angewandte Chemie, 2016, 128, 12522-12525.	1.6	9
36	Two Donorâ€“One Acceptor Random Terpolymer Comprised of Diketopyrrolopyrrole Quaterthiophene with Various Donor Ï€-Linkers for Organic Photovoltaic Application. Journal of Physical Chemistry C, 2016, 120, 26609-26619.	1.5	19

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37	Dithienogermole-based solution-processed molecular solar cells with efficiency over 9%. Chemical Communications, 2016, 52, 8596-8599.	2.2	49
38	NIR absorbing Dâ€“Ïâ€“Aâ€“Ïâ€“D structured diketopyrrolopyrroleâ€“dithiafulvalene based small molecule for solution processed organic solar cells. Chemical Communications, 2016, 52, 210-213.	2.2	38
39	Polymerâ€“Polymer FÃ¶rster Resonance Energy Transfer Significantly Boosts the Power Conversion Efficiency of Bulkâ€Heterojunction Solar Cells. Advanced Materials, 2015, 27, 4398-4404.	11.1	201
40	A high performance inverted organic solar cell with a low band gap small molecule (p-DTS(FBTTh₂)₂) using a fullerene derivative-doped zinc oxide nano-film modified with a fullerene-based self-assembled monolayer as the cathode. Journal of Materials Chemistry A, 2015, 3, 22599-22604.	5.2	23
41	Graphene Quantum Dot-Based Organic Solar Cells. Lecture Notes in Nanoscale Science and Technology, 2014, , 255-268.	0.4	1
42	Silaindacenodithiophene-Based Molecular Donor: Morphological Features and Use in the Fabrication of Compositionally Tolerant, High-Efficiency Bulk Heterojunction Solar Cells. Journal of the American Chemical Society, 2014, 136, 3597-3606.	6.6	136
43	Topological Considerations for the Design of Molecular Donors with Multiple Absorbing Units. Journal of the American Chemical Society, 2014, 136, 5591-5594.	6.6	46
44	Efficient Solutionâ€Processed Smallâ€Molecule Solar Cells with Inverted Structure. Advanced Materials, 2013, 25, 2397-2402.	11.1	480
45	Enhanced Efficiency Parameters of Solutionâ€Processable Smallâ€Molecule Solar Cells Depending on ITO Sheet Resistance. Advanced Energy Materials, 2013, 3, 1161-1165.	10.2	94
46	Barium: An Efficient Cathode Layer for Bulk-heterojunction Solar Cells. Scientific Reports, 2013, 3, 1965.	1.6	353
47	Intensity Dependence of Currentâ€“Voltage Characteristics and Recombination in High-Efficiency Solution-Processed Small-Molecule Solar Cells. ACS Nano, 2013, 7, 4569-4577.	7.3	857
48	Efficient solution-processed small molecule: Cadmium selenide quantum dot bulk heterojunction solar cells. Applied Physics Letters, 2013, 103, 253901.	1.5	3
49	Multifunctional Ferromagnetic Carbonâ€Nanotube Arrays Prepared by Pulseâ€Injection Chemical Vapor Deposition. Angewandte Chemie - International Edition, 2012, 51, 2916-2919.	7.2	16
50	Luminscent Graphene Quantum Dots for Organic Photovoltaic Devices. Journal of the American Chemical Society, 2011, 133, 9960-9963.	6.6	892
51	Electrochemically synthesized nanocrystalline spinel thin film for high performance supercapacitor. Journal of Power Sources, 2010, 195, 3757-3760.	4.0	83
52	Mechanochemical approach for fabrication of a nano-structured NiO-sensing electrode used in a zirconia-based NO2 sensor. Electrochimica Acta, 2010, 55, 6941-6945.	2.6	31
53	Nickel(ii) tetra-aminophthalocyanine modified MWCNTs as potential nanocomposite materials for the development of supercapacitors. Energy and Environmental Science, 2010, 3, 228-236.	15.6	148
54	Graphene as intermediate phase in fullerene and carbon nanotube growth: A Youngâ€“Laplace surface-tension model. Applied Physics Letters, 2010, 97, .	1.5	13

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55	C₆₀@MWCNT: Room Temperature Encapsulation of C₆₀into Multiwall Carbon Nanotubes. Carbon Letters, 2010, 11, 9-12.	3.3	0
56	Synthesis and electrochemical behavior of nanostructured cauliflower-shape Coâ€“Ni/Coâ€“Ni oxides composites. Materials Research Bulletin, 2009, 44, 202-206.	2.7	36
57	Electrochemically synthesized large area network of CoxNiyAlz layered triple hydroxides nanosheets: A high performance supercapacitor. Journal of Power Sources, 2009, 189, 1292-1295.	4.0	60
58	Potentiostatically deposited nanostructured CoxNi1âˆ’x layered double hydroxides as electrode materials for redox-supercapacitors. Journal of Power Sources, 2008, 175, 680-685.	4.0	287
59	Al-substituted Î±-cobalt hydroxide synthesized by potentiostatic deposition method as an electrode material for redox-supercapacitors. Journal of Power Sources, 2008, 177, 685-689.	4.0	86
60	Potentiostatically deposited nanostructured Î±-Co(OH)2: A high performance electrode material for redox-capacitors. Electrochemistry Communications, 2007, 9, 2315-2319.	2.3	303
61	Influence of the microstructure on the supercapacitive behavior of polyaniline/single-wall carbon nanotube composites. Journal of Power Sources, 2006, 157, 616-620.	4.0	131
62	Effects of electrochemical-deposition method and microstructure on the capacitive characteristics of nano-sized manganese oxide. Electrochimica Acta, 2006, 51, 4412-4419.	2.6	156
63	Polyaniline/single-wall carbon nanotube (PANI/SWCNT) composites for high performance supercapacitors. Electrochimica Acta, 2006, 52, 1721-1726.	2.6	380
64	High performance electrochemical supercapacitor from electrochemically synthesized nanostructured polyaniline. Materials Letters, 2006, 60, 1466-1469.	1.3	257
65	Large-area network of polyaniline nanowires prepared by potentiostatic deposition process. Electrochemistry Communications, 2005, 7, 995-999.	2.3	74
66	Electrochemically Deposited Polyaniline Nanowireâ€™s Network. Electrochemical and Solid-State Letters, 2005, 8, A630.	2.2	219
67	C60Intercalated Graphite: A New Form of Carbon. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 13, 427-430.	1.0	1
68	Synthesis of diamond by electron irradiation of C60 intercalated graphite. Materials Letters, 2005, 59, 3259-3261.	1.3	7
69	Synthesis of C60 intercalated graphite. Solid State Communications, 2004, 131, 153-155.	0.9	51
70	Influence of cointercalated HF on the electrochemical behavior of highly fluorinated graphite. Journal of Power Sources, 2004, 137, 80-87.	4.0	36
71	A study on the formation mechanism of graphite fluorides by Raman spectroscopy. Journal of Fluorine Chemistry, 2003, 120, 143-150.	0.9	64
72	Preparation of negative electrodes for lithium-ion rechargeable battery by pressure-pulsed chemical vapor infiltration of pyrolytic carbon into electro-conductive forms. Journal of Power Sources, 2003, 122, 153-161.	4.0	33

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73	Pressure-pulsed chemical vapor infiltration of pyrolytic carbon into fibrous tin prepared from carbonized paper preform. Molecular Crystals and Liquid Crystals, 2002, 386, 9-13.	0.4	3
74	Surface Structure And Electrochemical Characteristics Of Graphite Fluorinated By Elemental Fluorine And Plasma Treatment Using Cf 4. Molecular Crystals and Liquid Crystals, 2002, 388, 103-108.	0.4	15
75	Fluorination of Graphite at High Temperatures. Collection of Czechoslovak Chemical Communications, 2002, 67, 1366-1372.	1.0	2
76	Raman scattering study of graphite fluorides. Molecular Crystals and Liquid Crystals, 2002, 386, 25-31.	0.4	10
77	Electrochemical behavior of plasma-fluorinated graphite for lithium ion batteries. Journal of Power Sources, 2002, 104, 108-114.	4.0	85
78	Electrochemical properties and structures of surface-fluorinated graphite for the lithium ion secondary battery. Journal of Fluorine Chemistry, 2002, 114, 209-214.	0.9	43
79	Raman scattering study of highly fluorinated graphite. Journal of Fluorine Chemistry, 2001, 110, 145-151.	0.9	41
80	Electrochemical characteristics and structures of surface-fluorinated graphites with different particle sizes for lithium ion secondary batteries. Journal of Fluorine Chemistry, 2001, 112, 233-240.	0.9	40
81	Role of Electrochemical Techniques for Photovoltaic and Supercapacitor Applications. Critical Reviews in Analytical Chemistry, 0, , 1-35.	1.8	9