Bhanu Bhusan Khatua

List of Publications by Year
in descending order

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98 papers	4,815 citations	94415 37 h-index	98792 67 g-index
99 all docs	99 docs citations	99 times ranked	5179 citing authors

#	Article	IF	Citations
1	Advanced self-charging power packs: The assimilation of energy harvesting and storage systems. , 2022, , 441-477.		1
2	Advanced functional materials and devices for energy conversion and storage applications. , 2022, , 43-96.		2
3	A microstructure-driven magnetic composite for excellent microwave absorption in extended Ku-band. Journal of Materials Chemistry C, 2022, 10, 3863-3875.	5.5	9
4	Comparative supercapacitive analysis of 2-methylimidazole derived cobalt nickel oxides (CoNiO2 and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Storage, 2022, 52, 104993.	8.1	4
5	Fabrication of a flexible quasi-solid-state asymmetric supercapacitor device based on a spherical honeycomb like ZnMn2O4@Ni(OH)2 hybrid core-shell electrode material with superior electrochemical performances. Results in Chemistry, 2022, 4, 100404.	2.0	5
6	An approach to designing smart future electronics using nature-driven biopiezoelectric/triboelectric nanogenerators. , 2021, , 251-282.		2
7	Autonomous self-repair in piezoelectric molecular crystals. Science, 2021, 373, 321-327.	12.6	72
8	Photovoltaic and triboelectrification empowered light-weight flexible self-charging asymmetric supercapacitor cell for self-powered multifunctional electronics. Renewable and Sustainable Energy Reviews, 2021, 151, 111595.	16.4	20
9	High performance alkaline battery-supercapacitor hybrid device based on diffusion driven double shelled CoSn(OH)6 nanocube@âˆ•Ni(OH)2 core-shell nanoflower. Journal of Energy Storage, 2021, 43, 103206.	8.1	5
10	A Quasi-Solid-State Asymmetric Supercapacitor Device Based on Honeycomb-like Nickelâ€“Copperâ€“Carbonateâ€“Hydroxide as a Positive and Iron Oxide as a Negative Electrode with Superior Electrochemical Performances. ACS Applied Electronic Materials, 2020, 2, 177-185.	4.3	34
11	A polypyrrole-adorned, self-supported, pseudocapacitive zinc vanadium oxide nanoflower and nitrogen-doped reduced graphene oxide-based asymmetric supercapacitor device for power density applications. New Journal of Chemistry, 2020, 44, 1063-1075.	2.8	35
12	Nanostructured cigarette wrapper encapsulated <scp>PDMSâ€RGO</scp> sandwiched composite for high performance <scp>EMI</scp> shielding applications. Polymer Engineering and Science, 2020, 60, 3056-3071.	3.1	15
13	Approach for Enhancement in Output Performance of Randomly Oriented ZnSnO₃ Nanorod-Based Piezoelectric Nanogenerator via pâ€“n Heterojunction and Surface Passivation Layer. ACS Applied Electronic Materials, 2020, 2, 2565-2578.	4.3	22
14	Recent Advances in Selfâ€Powered Triboâ€/Piezoelectric Energy Harvesters: Allâ€inâ€One Package for Future Smart Technologies. Advanced Functional Materials, 2020, 30, 2004446.	14.9	133
15	In situ-grown organo-lead bromide perovskite-induced electroactive Î³-phase in aerogel PVDF films: an efficient photoactive material for piezoelectric energy harvesting and photodetector applications. Nanoscale, 2020, 12, 7214-7230.	5.6	44
16	A strategy to develop highly efficient TENGs through the dielectric constant, internal resistance optimization, and surface modification. Journal of Materials Chemistry A, 2019, 7, 3979-3991.	10.3	70
17	Fabrication of an Advanced Asymmetric Supercapacitor Based on Three-Dimensional Copperâ€“Nickelâ€“Ceriumâ€“Cobalt Quaternary Oxide and GNP for Energy Storage Application. ACS Applied Electronic Materials, 2019, 1, 189-197.	4.3	66
18	Highly Rate Capable Nanoflower-like NiSe and WO₃@PPy Composite Electrode Materials toward High Energy Density Flexible All-Solid-State Asymmetric Supercapacitor. ACS Applied Electronic Materials, 2019, 1, 977-990.	4.3	86

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19	PVC bead assisted selective dispersion of MWCNT for designing efficient electromagnetic interference shielding PVC/MWCNT nanocomposite with very low percolation threshold. Composites Part B: Engineering, 2019, 167, 377-386.	12.0	39
20	Nature Driven Bioâ€Piezoelectric/Triboelectric Nanogenerator as Nextâ€Generation Green Energy Harvester for Smart and Pollution Free Society. Advanced Energy Materials, 2019, 9, 1803027.	19.5	111
21	Designing high energy conversion efficient bio-inspired vitamin assisted single-structured based self-powered piezoelectric/wind/acoustic multi-energy harvester with remarkable power density. Nano Energy, 2019, 59, 169-183.	16.0	107
22	Morphological interference of two different cobalt oxides derived from a hydrothermal protocol and a single two-dimensional metal organic framework precursor to stabilize the Î²-phase of PVDF for flexible piezoelectric nanogenerators. Nanoscale, 2019, 11, 22989-22999.	5.6	47
23	Triboelectric Nanogenerator Driven Self-Charging and Self-Healing Flexible Asymmetric Supercapacitor Power Cell for Direct Power Generation. ACS Applied Materials & Interfaces, 2019, 11, 5022-5036.	8.0	63
24	Graphene, Its Analogues, and Modern Science. Springer Proceedings in Physics, 2019, , 215-236.	0.2	0
25	Temperature dependent substrate-free facile synthesis for hierarchical sunflower-like nickelâ€“copper carbonate hydroxide with superior electrochemical performance for solid state asymmetric supercapacitor. Chemical Engineering Journal, 2018, 343, 44-53.	12.7	38
26	A strategy to develop an efficient piezoelectric nanogenerator through ZTO assisted Î³-phase nucleation of PVDF in ZTO/PVDF nanocomposite for harvesting bio-mechanical energy and energy storage application. Materials Chemistry and Physics, 2018, 213, 525-537.	4.0	71
27	An approach to widen the electromagnetic shielding efficiency in PDMS/ferrous ferric oxide decorated RGOâ€“SWCNH composite through pressure induced tunability. Chemical Engineering Journal, 2018, 335, 501-509.	12.7	67
28	Insight into Cigarette Wrapper and Electroactive Polymer Based Efficient TENG as Biomechanical Energy Harvester for Smart Electronic Applications. ACS Applied Energy Materials, 2018, 1, 4963-4975.	5.1	26
29	A new insight towards eggshell membrane as high energy conversion efficient bio-piezoelectric energy harvester. Materials Today Energy, 2018, 9, 114-125.	4.7	82
30	High performance advanced asymmetric supercapacitor based on ultrathin and mesoporous MnCo2O4.5-NiCo2O4 hybrid and iron oxide decorated reduced graphene oxide electrode materials. Electrochimica Acta, 2018, 283, 438-447.	5.2	47
31	Nature driven spider silk as high energy conversion efficient bio-piezoelectric nanogenerator. Nano Energy, 2018, 49, 655-666.	16.0	136
32	An Approach To Fabricate PDMS Encapsulated All-Solid-State Advanced Asymmetric Supercapacitor Device with Vertically Aligned Hierarchical Znâ€“Feâ€“Co Ternary Oxide Nanowire and Nitrogen Doped Graphene Nanosheet for High Power Device Applications. ACS Applied Materials & Interfaces, 2017, 9, 5947-5958.	8.0	81
33	A Mesoporous High-Performance Supercapacitor Electrode Based on Polypyrrole Wrapped Iron Oxide Decorated Nanostructured Cobalt Vanadium Oxide Hydrate with Enhanced Electrochemical Capacitance. Industrial & Engineering Chemistry Research, 2017, 56, 2444-2457.	3.7	42
34	Polyaniline/Î±-Ni(OH)2/iron oxide-doped reduced graphene oxide-based hybrid electrode material. Journal of Applied Electrochemistry, 2017, 47, 531-546.	2.9	12
35	Fabrication of an advanced asymmetric supercapacitor based on a microcubical PB@MnO₂hybrid and PANI/GNP composite with excellent electrochemical behaviour. Journal of Materials Chemistry A, 2017, 5, 22242-22254.	10.3	75
36	Bio-waste onion skin as an innovative nature-driven piezoelectric material with high energy conversion efficiency. Nano Energy, 2017, 42, 282-293.	16.0	117

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37	Fast charging self-powered wearable and flexible asymmetric supercapacitor power cell with fish swim bladder as an efficient natural bio-piezoelectric separator. Nano Energy, 2017, 40, 633-645.	16.0	89
38	Salt leached viable porous Fe3O4 decorated polyaniline â€“ SWCNH/PVDF composite spectacles as an admirable electromagnetic shielding efficiency in extended Ku-band region. Composites Part B: Engineering, 2017, 129, 210-220.	12.0	52
39	NaCl leached sustainable porous flexible Fe3O4 decorated RGO-polyaniline/PVDF composite for durable application against electromagnetic pollution. EXPRESS Polymer Letters, 2017, 11, 419-433.	2.1	23
40	Effect of Î³-PVDF on enhanced thermal conductivity and dielectric property of Fe-rGO incorporated PVDF based flexible nanocomposite film for efficient thermal management and energy storage applications. RSC Advances, 2016, 6, 37773-37783.	3.6	58
41	Optically transparent polycarbonate/clay nanocomposites with improved performance using phosphonium modified organoclay: Preparation and characterizations. Polymer Composites, 2016, 37, 199-212.	4.6	5
42	A Facile Approach To Develop a Highly Stretchable PVC/ZnSnO₃ Piezoelectric Nanogenerator with High Output Power Generation for Powering Portable Electronic Devices. Industrial & Engineering Chemistry Research, 2016, 55, 10671-10680.	3.7	75
43	An Approach to Design Highly Durable Piezoelectric Nanogenerator Based on Selfâ€Poled PVDF/AlOâ€rGO Flexible Nanocomposite with High Power Density and Energy Conversion Efficiency. Advanced Energy Materials, 2016, 6, 1601016.	19.5	324
44	Expanded graphite (<scp>EG</scp>) as a potential filler in the reduction of percolation threshold of multiwall carbon nanotubes (<scp>MWCNT</scp>) in the <scp>PMMA/HDPE/EG/MWCNT</scp> nanocomposites. Polymer Composites, 2016, 37, 2070-2082.	4.6	12
45	Graphene nanoplate and multiwall carbon nanotubeâ€“embedded polycarbonate hybrid composites: High electromagnetic interference shielding with low percolation threshold. Polymer Composites, 2016, 37, 2058-2069.	4.6	49
46	Green composites based on highâ€density polyethylene andSaccharum spontaneum: Effect of filler content on morphology, thermal, and mechanical properties. Polymer Composites, 2015, 36, 2157-2166.	4.6	13
47	High electromagnetic interference shielding with high electrical conductivity through selective dispersion of multiwall carbon nanotube in poly (Îµâ€caprolactone)/<scp>MWCNT</scp> composites. Journal of Applied Polymer Science, 2015, 132, .	2.6	15
48	Reduction of percolation threshold of multiwall carbon nanotube (MWCNT) in polystyrene (PS)/lowâ€density polyethylene (LDPE)/MWCNT nanocomposites: An ecoâ€friendly approach. Polymer Composites, 2015, 36, 1574-1583.	4.6	13
49	Carbon nanohorn and graphene nanoplate based polystyrene nanocomposites for superior electromagnetic interference shielding applications. Journal of Applied Polymer Science, 2015, 132, .	2.6	29
50	Self-powered flexible Fe-doped RGO/PVDF nanocomposite: an excellent material for a piezoelectric energy harvester. Nanoscale, 2015, 7, 10655-10666.	5.6	303
51	Single wall carbon nanohorn (SWCNH)/graphene nanoplate/poly(methyl methacrylate) nanocomposites: a promising material for electromagnetic interference shielding applications. RSC Advances, 2015, 5, 70482-70493.	3.6	21
52	High Energy Density Ternary Composite Electrode Material Based on Polyaniline (PANI), Molybdenum trioxide (MoO3) and Graphene Nanoplatelets (GNP) Prepared by Sono-Chemical Method and Their Synergistic Contributions in Superior Supercapacitive Performance. Electrochimica Acta, 2015, 180, 1-15.	5.2	96
53	Facile preparation of highly exfoliated and optically transparent polycarbonate (PC)/clay mineral nanocomposites using phosphonium modified organoclay mineral. Applied Clay Science, 2014, 95, 182-190.	5.2	13
54	Low percolation threshold and high electrical conductivity in melt-blended polycarbonate/multiwall carbon nanotube nanocomposites in the presence of poly(Îµ-caprolactone). Polymer Engineering and Science, 2014, 54, 646-659.	3.1	23

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55	An approach to reduce the percolation threshold of MWCNT in ABS/MWCNT nanocomposites through selective distribution of CNT in ABS matrix. RSC Advances, 2014, 4, 24584.	3.6	21
56	Highly exfoliated eco-friendly thermoplastic starch (TPS)/poly (lactic acid)(PLA)/clay nanocomposites using unmodified nanoclay. Carbohydrate Polymers, 2014, 110, 430-439.	10.2	147
57	Effect of nanoclay on the morphology and properties of acrylonitrile butadiene styrene toughened polyoxymethylene (POM)/clay nanocomposites. Polymer Composites, 2014, 35, 273-282.	4.6	26
58	A strategy to achieve high electromagnetic interference shielding and ultra low percolation in multiwall carbon nanotubeâ€"polycarbonate composites through selective localization of carbon nanotubes. RSC Advances, 2014, 4, 7979.	3.6	80
59	Reduction of percolation threshold through double percolation in meltâ€blended polycarbonate/acrylonitrile butadiene styrene/multiwall carbon nanotubes elastomer nanocomposites. Polymer Composites, 2013, 34, 570-579.	4.6	77
60	Phosphonium modified organoclay as potential nanofiller for the development of exfoliated and optically transparent polycarbonate/clay nanocomposites: Preparation and characterizations. European Polymer Journal, 2013, 49, 49-60.	5.4	31
61	Development of electrical conductivity in PP/HDPE/MWCNT nanocomposite by melt mixing at very low loading of MWCNT. Polymer Composites, 2013, 34, 787-798.	4.6	31
62	Electrochemical and electrical performances of cobalt chloride (CoCl2) doped polyaniline (PANI)/graphene nanoplate (GNP) composite. RSC Advances, 2013, 3, 12874.	3.6	33
63	Low percolation threshold in melt-blended PC/MWCNT nanocomposites in the presence of styrene acrylonitrile (SAN) copolymer: Preparation and characterizations. Synthetic Metals, 2013, 165, 40-50.	3.9	34
64	Polystyrene/MWCNT/Graphite Nanoplate Nanocomposites: Efficient Electromagnetic Interference Shielding Material through Graphite Nanoplateâ€"MWCNTâ€"Graphite Nanoplate Networking. ACS Applied Materials & Interfaces, 2013, 5, 4712-4724.	8.0	295
65	Low percolation threshold in polycarbonate/multiwalled carbon nanotubes nanocomposites through melt blending with poly(butylene terephthalate). Journal of Applied Polymer Science, 2013, 130, 543-553.	2.6	86
66	Ultralow Electrical Percolation Threshold in Poly(styrene-co-acrylonitrile)/Carbon Nanotube Nanocomposites. Industrial & Engineering Chemistry Research, 2013, 52, 2858-2868.	3.7	24
67	Positive temperature coefficient to resistively characteristics of polystyrene/nickel powder/multiwall carbon nanotubes composites. Polymer Composites, 2012, 33, 1977-1986.	4.6	3
68	Exfoliated and Optically Transparent Polycarbonate/Clay Nanocomposites Using Phosphonium Modified Organoclay: Preparation and Characterizations. Industrial & Engineering Chemistry Research, 2012, 51, 15096-15108.	3.7	11
69	A facile route to develop electrical conductivity with minimum possible multiâ€wall carbon nanotube (MWCNT) loading in poly(methyl methacrylate)/MWCNT nanocomposites. Polymer International, 2012, 61, 1683-1692.	3.1	21
70	Effect of nanoclay on positive temperature coefficient to resistivity characteristics of high density polyethylene/silverâ€coated glass bead composites. Polymer Composites, 2012, 33, 819-828.	4.6	7
71	Preparation of highly exfoliated and transparent polycarbonate/clay nanocomposites by melt blending of polycarbonate and poly(methyl methacrylate)/clay nanocomposites. Journal of Applied Polymer Science, 2012, 125, E601.	2.6	24
72	Morphology and properties of nylon 6 and high density polyethylene blends in presence of nanoclay and PEâ€gâ€MA. Journal of Applied Polymer Science, 2012, 123, 1801-1811.	2.6	29

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73	Electrical and mechanical properties of acrylonitrileâ€butadieneâ€styrene/multiwall carbon nanotube nanocomposites prepared by meltâ€blending. Journal of Applied Polymer Science, 2012, 124, 3165-3174.	2.6	26
74	PTCR characteristics of poly(styreneâ€coâ€acrylonitrile) copolymer/stainless steel powder composites. Journal of Applied Polymer Science, 2012, 124, 607-615.	2.6	8
75	Synthesis of highly exfoliated PS/Na+-MMT nanocomposites by suspension polymerization using Na+-MMT clay platelets as suspension stabilizer. Macromolecular Research, 2011, 19, 44-52.	2.4	15
76	Preparation by suspension polymerization and characterization of polystyrene (PS)-poly(methyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	2.4	34
77	PTCR characteristics of polycarbonate/nickelâ€coated graphiteâ€based conducting polymeric composites in presence of poly(caprolactone). Polymer Composites, 2011, 32, 747-755.	4.6	12
78	Highly reversible and repeatable PTCR characteristics of PMMA/Agâ€coated glass bead composites based on CTE mismatch phenomena. Polymer Engineering and Science, 2011, 51, 1780-1790.	3.1	19
79	Cocontinuous phase morphology of asymmetric compositions of polypropylene/highâ€density polyethylene blend by the addition of clay. Journal of Applied Polymer Science, 2011, 119, 3080-3092.	2.6	35
80	Morphology and properties of nylon6 and high density polyethylene blends in absence and presence of nanoclay. Journal of Applied Polymer Science, 2011, 121, 359-368.	2.6	23
81	Development of electrical conductivity with minimum possible percolation threshold in multi-wall carbon nanotube/polystyrene composites. Carbon, 2011, 49, 4571-4579.	10.3	82
82	Properties of Polycarbonate (PC)/Multi-Wall Carbon Nanotube (MWCNT) Nanocomposites Prepared by Melt Blending. Journal of Nanoscience and Nanotechnology, 2011, 11, 8613-8620.	0.9	7
83	Effect of Nanoclay and SEBS-g-MA on the Morphology and Properties of Immiscible Poly(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock	0.9	3
84	Thermal and Rheological Properties of Biodegradable Poly[(butylene succinate)-co-adipate] Nanocomposites. Journal of Nanoscience and Nanotechnology, 2010, 10, 4184-4195.	0.9	17
85	Preparation and Characterization of Poly(methyl methacrylate)/Multi-Walled Carbon Nanotube Composites. Journal of Nanoscience and Nanotechnology, 2009, 9, 4644-4655.	0.9	25
86	Multi-Walled Carbon Nanotubes/Polymer Composites in Absence and Presence of Acrylic Elastomer (ACM). Journal of Nanoscience and Nanotechnology, 2009, 9, 2981-2990.	0.9	7
87	Use of Pristine Clay Platelets as a Suspension Stabilizer for the Synthesis of Poly(methyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5	2.2	16
88	Macromol. Chem. Phys. 13-14/2009. Macromolecular Chemistry and Physics, 2009, 210, NA-NA.	2.2	0
89	Effect of clay platelet dispersion as affected by the manufacturing techniques on thermal and mechanical properties of PMMAâ€clay nanocomposites. Journal of Applied Polymer Science, 2009, 113, 3012-3018.	2.6	34
90	Synergistic Effect of Nanoclay and EPR-g-MA on the Properties of Nylon6/EPR Blends. Journal of Nanoscience and Nanotechnology, 2009, 9, 3099-3105.	0.9	1

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91	Mechanical, morphological and thermal properties of in situ ternary composites based on poly(ether) Tj ETQq1 1 0.784314 rgBT /Ove Structural Materials: Properties, Microstructure and Processing, 2008, 490, 198-207.	5.6	19
92	Studies on nylon-6/EVOH/clay ternary composites. Polymer Composites, 2006, 27, 15-23.	4.6	6
93	Aging behavior of oxygen plasma-treated polypropylene with different crystallinities. Journal of Adhesion Science and Technology, 2004, 18, 1279-1291.	2.6	80
94	Investigation of surface molecular orientation of poly(dimethylsiloxane-co-diphenylsiloxane)-modified poly(amic acid) films using dynamic contact angle measurements, NEXAFS and XPS. Journal of Adhesion Science and Technology, 2004, 18, 1815-1831.	2.6	4
95	Interchain crosslinkable polymer blends of polyurethane and polyacrylic elastomer (sulfur cure). Journal of Applied Polymer Science, 2004, 93, 845-853.	2.6	0
96	Effect of Organoclay Platelets on Morphology of Nylon-6 and Poly(ethylene-ran-propylene) Rubber Blends. Macromolecules, 2004, 37, 2454-2459.	4.8	350
97	Thermally crosslinked polymer blends of polyurethane and chlorobutyl elastomers (sulfur cure). Polymer International, 2001, 50, 495-502.	3.1	2
98	Polyblend systems of polyurethane (AU) and ethylene acrylic elastomer (vamac) using the sulfur cure systems. Journal of Applied Polymer Science, 2001, 80, 2737-2745.	2.6	4