Sarat K Swain

List of Publications by Citations

113 papers	1,875 citations	25 h-index	36 g-index
113 ext. papers	2,145 ext. citations	4 avg, IF	5.68 L-index

#	Paper	IF	Citations
113	Effect of ultrasound on HDPE/clay nanocomposites: Rheology, structure and properties. *Polymer*, **2007**, 48, 281-289	3.9	119
112	Anticorrosion Performance of Three-Dimensional Hierarchical PANI@BN Nanohybrids. *Industrial & Engineering Chemistry Research*, **2016**, 55, 2921-2931	3.9	70
111	PA6/clay nanocomposites by continuous sonication process. *Journal of Applied Polymer Science*, **2009**, 114, 2378-2387	2.9	60
110	Phenylboronic acid functionalized reduced graphene oxide based fluorescence nano sensor for glucose sensing. *Materials Science and Engineering C*, **2016**, 58, 103-9	8.3	58
109	Nano silver decorated polyacrylamide/dextran nanohydrogels hybrid composites for drug delivery applications. *Materials Science and Engineering C*, **2018**, 85, 130-141	8.3	57
108	Carbon quantum dot tailored calcium alginate hydrogel for pH responsive controlled delivery of vancomycin. *European Journal of Pharmaceutical Sciences*, **2017**, 109, 359-371	5.1	51
107	Synthesis and Characterization of Chitosan/Boron Nitride Composites. *Journal of the American Ceramic Society*, **2012**, 95, 2753-2757	3.8	47
106	Synthesis of gas barrier starch by dispersion of functionalized multiwalled carbon nanotubes. *Carbohydrate Polymers*, **2013**, 94, 663-8	10.3	47
105	Soy Protein/Clay Bionanocomposites as Ideal Packaging Materials. *Polymer-Plastics Technology and Engineering*, **2012**, 51, 1282-1287		45
104	Cellulose nanobiocomposites with reinforcement of boron nitride: study of thermal, oxygen barrier and chemical resistant properties. *Carbohydrate Polymers*, **2013**, 95, 728-32	10.3	39
103	Expanded graphite as a filler for epoxy matrix composites to improve their thermal, mechanical and electrical properties. *New Carbon Materials*, **2015**, 30, 432-437	4.4	39
102	Nano silver imprinted polyvinyl alcohol nanocomposite thin films for Hg2+ sensor. *Sensors and Actuators B: Chemical*, **2017**, 246, 96-107	8.5	38
101	Nano gold decorated reduced graphene oxide wrapped polymethylmethacrylate for supercapacitor applications. *RSC Advances*, **2017**, 7, 2137-2150	3.7	37
100	Effect of nanoboron nitride on the physical and chemical properties of soy protein. *Composites Science and Technology*, **2013**, 84, 39-43	8.6	37
99	Ultrasound aided extrusion process for preparation of polyolefin□lay nanocomposites. *Polymer Engineering and Science*, **2008**, 48, 1584-1591	2.3	35
98	Synthesis of poly(butyl acrylate)/sodium silicate nanocomposite fire retardant. *European Polymer Journal*, **2008**, 44, 3522-3528	5.2	33
97	Synthesis of thermal and chemical resistant oxygen barrier starch with reinforcement of nano silicon carbide. *Carbohydrate Polymers*, **2013**, 97, 758-63	10.3	30

96	Effect of nanoclay on morphological, thermal, and barrier properties of albumin bovine. *Polymer Composites*, **2012**, 33, 2201-2206	3	29
95	Graphene quantum dot decorated magnetic graphene oxide filled polyvinyl alcohol hybrid hydrogel for removal of dye pollutants. *Journal of Molecular Liquids*, **2020**, 302, 112591	6	28
94	Barrier properties of nano silicon carbide designed chitosan nanocomposites. *Carbohydrate Polymers*, **2015**, 134, 60-5	10.3	27
93	Effect of chemically modified date palm leaf fiber on mechanical, thermal and rheological properties of polyvinylpyrrolidone. *Fibers and Polymers*, **2014**, 15, 1062-1070	2	27
92	Effective mechanical properties of polyvinylalcohol biocomposites with reinforcement of date palm leaf fibers. *Polymer Composites*, **2013**, 34, 959-966	3	27
91	Synthesis of soy protein/polyacrylamide nanocomposite hydrogels for delivery of ciprofloxacin drug. *Materials Chemistry and Physics*, **2019**, 234, 378-389	4.4	26
90	Carbon Nanomaterial‐Reinforced Epoxy Composites: A Review. *Polymer-Plastics Technology and Engineering*, **2018**, 57, 1-16		26
89	Thermal and Oxygen Barrier Properties of Chitosan Bionanocomposites by Reinforcement of Calcium Carbonate Nanopowder. *Journal of Materials Science and Technology*, **2014**, 30, 791-795	9.1	26
88	Three-Dimensional Rice Straw-Structured Magnetic Nanoclay-Decorated Tripolymeric Nanohydrogels as Superadsorbent of Dye Pollutants. *ACS Applied Nano Materials*, **2018**, 1, 1188-1203	5.6	24
87	Release of ciprofloxacin drugs by nano gold embedded cellulose grafted polyacrylamide hybrid nanocomposite hydrogels. *International Journal of Biological Macromolecules*, **2019**, 126, 765-775	7.9	24
86	Preparation of Starch/PVA/CaCO3 Nanobiocomposite Films: Study of Fire Retardant, Thermal Resistant, Gas Barrier and Biodegradable Properties. *Polymer-Plastics Technology and Engineering*, **2014**, 53, 1664-1670		22
85	Synthesis and characterization of conducting gas barrier polyacrylonitrile/graphite nanocomposites. *Polymer Composites*, **2011**, 32, 1336-1342	3	22
84	Swelling study of superabsorbent PAA-co-PAM/clay nanohydrogel. *Journal of Applied Polymer Science*, **2011**, 120, 1533-1538	2.9	22
83	Nano silver embedded starch hybrid graphene oxide sandwiched poly(ethylmethacrylate) for packaging application. *Nano Structures Nano Objects*, **2019**, 18, 100300	5.6	21
82	Nano CaCO3 imprinted starch hybrid polyethylhexylacrylatepolyvinylalcohol nanocomposite thin films. *Carbohydrate Polymers*, **2016**, 139, 90-8	10.3	21
81	Ultrasound assisted synthesis of PMMA/clay nanocomposites: Study of oxygen permeation and flame retardant properties. *Bulletin of Materials Science*, **2012**, 35, 27-32	1.7	21
80	Influence of functionalized single-walled carbon nanotubes on morphology, conducting and oxygen barrier properties of poly (acrylonitrile-co-starch). *Composites Part B: Engineering*, **2014**, 62, 236-241	10	20
79	Dispersion of multiwalled carbon nanotubes in polyacrylonitrile-co-starch copolymer matrix for enhancement of electrical, thermal, and gas barrier properties. *Polymer Composites*, **2013**, 34, 330-334	3	20

78	Dispersion of SiC nanoparticles in cellulose for study of tensile, thermal and oxygen barrier properties. *Carbohydrate Polymers*, **2014**, 99, 306-10	10.3	20
77	Application of quercetin flavonoid based hybrid nanocomposites: A review. *Saudi Pharmaceutical Journal*, **2020**, 28, 1719-1732	4.4	20
76	Study of oxygen permeability and flame retardancy properties of biodegradable polymethylmethacrylate/starch composites. *Polymer Composites*, **2012**, 33, 79-84	3	19
75	The effect of reduced graphene oxide intercalated hybrid organoclay on the dielectric properties of polyvinylidene fluoride nanocomposite films. *Applied Clay Science*, **2018**, 162, 69-82	5.2	18
74	Oxygen Barrier of Multiwalled Carbon Nanotube/Polymethyl Methacrylate Nanocomposites Prepared by in situ Method. *Journal of Materials Science and Technology*, **2012**, 28, 391-395	9.1	18
73	Poly(acrylamide-co-vinyl alcohol)Superabsorbent materials reinforced by modified clay. *Polymer Composites*, **2013**, 34, 1794-1800	3	18
72	Reduced graphene oxide decorated superporous polyacrylamide based interpenetrating network hydrogel as dye adsorbent. *Materials Chemistry and Physics*, **2020**, 250, 123022	4.4	18
71	Study of thermal, oxygen-barrier, fire-retardant and biodegradable properties of starch bionanocomposites. *Polymer Composites*, **2014**, 35, 1238-1243	3	17
70	Electrical conductivity and oxygen permeability of polyacrylonitrile/multiwalled carbon nanotubes composites. *Polymer Composites*, **2012**, 33, 1114-1119	3	17
69	Effect of zirconium oxide nanopowder on the thermal, chemical and gas barrier properties of starch. *Materials Science in Semiconductor Processing*, **2014**, 23, 115-121	4.3	16
68	Nanoclay sandwiched reduced graphene oxide filled macroporous polyacrylamide-agar hybrid hydrogel as an adsorbent for dye decontamination. *Nano Structures Nano Objects*, **2020**, 23, 100507	5.6	15
67	Characterization, Biodegradation, and Water Absorbency of Chemically Modified Tossa Variety Jute Fiber via Pulping and Grafting with Acrylamide. *International Journal of Polymer Analysis and Characterization*, **2005**, 10, 153-167	1.7	15
66	Emulsifier-free emulsion polymerization of acrylonitrile: Effect ofin situ developed Cu(II)/glycine chelate complex initiated by monopersulfate. *Journal of Applied Polymer Science*, **1999**, 74, 2785-2790	2.9	15
65	Designing of Epoxy Matrix by Chemically Modified Multiwalled Carbon Nanotubes. *Advances in Polymer Technology*, **2018**, 37, 176-184	1.9	14
64	Effect of organoclays on the thermal, mechanical, and oxygen barrier properties of poly(methylmethacrylate-co-acrylonitrile)/clay nanocomposites. *Polymer Composites*, **2012**, 33, 796-802	3	14
63	Synthesis and characterization of poly(acrylonitrile-co-methylmethacrylate) nanocomposites reinforced by functionalized multiwalled carbon nanotubes. *Iranian Polymer Journal (English Edition)*, **2013**, 22, 369-376	2.3	14
62	SYNTHESIS OF PAN/CLAY NANOCOMPOSITES: STUDY OF GAS PERMEATION PROPERTIES. *International Journal of Nanoscience*, **2011**, 10, 1101-1105	0.6	14
61	Synthesis of zirconocene-acetylene and zirconocene-diacetylene polymer. *Journal of Polymer Science Part A*, **1999**, 37, 3899-3902	2.5	14

60	Highly orange fluorescence emission by water soluble gold nanoclusters for turn off sensing of Hg2+ ion. *Journal of Photochemistry and Photobiology A: Chemistry*, **2020**, 386, 112098	4.7	13
59	Biomedical applications of acrylic-based nanohydrogels. *Journal of Materials Science*, **2018**, 53, 2303-2325	4.3	12
58	Preparation of thermal resistant gas barrier chitosan nanobiocomposites. *Polymer Composites*, **2014**, 35, 2324-2328	3	12
57	Poly(methyl methacrylate)/soy protein green composites as gas barrier materials. *Chinese Journal of Polymer Science (English Edition)*, **2012**, 30, 397-404	3.5	12
56	Conductive, Gas Barrier, and Thermal Resistant Behavior of Poly (methyl methacrylate) Composite by Dispersion of ZrO2 Nanoparticles. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2013**, 62, 733-736	3	12
55	Characterization and properties of chemically modified Corchorus capsularis jute fiber via pulping and grafting: Infrared, thermogravimetric analysis, differential scanning calorimetry, scanning electron microscopy, X-ray diffraction, biodegradation, and superabsorbency. *Journal of Polymer Science Part A*, **2003**, 41, 2696-2703	2.5	12
54	Dual Activities of Nano Silver Embedded Reduced Graphene Oxide Using Clove Leaf Extracts: Hg2+ Sensing and Catalytic Degradation. *ChemistrySelect*, **2019**, 4, 2593-2602	1.8	11
53	Effects of boron nitride nanopowder on thermal, chemical and gas barrier properties of starch. *Chinese Journal of Polymer Science (English Edition)*, **2014**, 32, 1311-1318	3.5	11
52	Dispersion of expanded graphite as nanoplatelets in a copolymer matrix and its effect on thermal stability, electrical conductivity and permeability. *New Carbon Materials*, **2012**, 27, 271-277	4.4	11
51	Fabrication of acrylic modified coconut fiber reinforced polypropylene biocomposites: Study of mechanical, thermal, and erosion properties. *Polymer Composites*, **2017**, 38, 2852-2862	3	10
50	Preparation and characterization of bionanocomposites based on soluble starch/nano CaCO3. *Polymer Composites*, **2018**, 39, E82-E89	3	10
49	Dispersion of ZrO2 nanoparticles in polyacrylonitrile: Preparation of thermally-resistant electrically-conductive oxygen barrier nanocomposites. *Materials Science in Semiconductor Processing*, **2013**, 16, 2039-2043	4.3	9
48	Ultrasonic and Viscometric Study of Synthesized PAN/Clay Nanocomposites. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2011**, 60, 959-968	3	9
47	Nano Gold Hybrid Polyvinyl Alcohol Films for Sensing of Cu2+ ions. *ChemistrySelect*, **2019**, 4, 9784-9793	1.8	8
46	Design of carbon nanofiber embedded conducting epoxy resin. *Materials Chemistry and Physics*, **2017**, 186, 29-35	4.4	8
45	Enhancement of thermal properties of polyacrylonitrile by reinforcement of Mg-Al layered double hydroxide. *Polymer Composites*, **2015**, 36, 2140-2144	3	8
44	Effect of Cu(II)/H2 Salen complex on the non-conventional initiated emulsion polymerization of acrylonitrile. *European Polymer Journal*, **2002**, 38, 345-350	5.2	8
43	Rhodamine B associated Ag/r-GO nanocomposites as ultrasensitive fluorescent sensor for Hg2+. *Microchemical Journal*, **2020**, 154, 104577	4.8	8

42	Antimicrobial and barrier properties of polyacrylic acid/GO hybrid nanocomposites for packaging application. *Nano Structures Nano Objects*, **2021**, 26, 100747	5.6	8
41	Emulsifier-free emulsion polymerization of acrylonitrile: Effect of in situ developed Cu(II)/glycine chelate complex initiated by monopersulfate. *Journal of Applied Polymer Science*, **1999**, 74, 2785	2.9	7
40	Silver Nanoparticles Decorated Polyethylmethacrylate/Graphene Oxide Composite: As Packaging Material. *Polymer Composites*, **2019**, 40, E1199-E1207	3	7
39	Nanoclay decorated polyacrylic acid/starch hybrid nanocomposite thin films as packaging materials. *Polymer Composites*, **2019**, 40, 229-239	3	7
38	Nano silicon carbide embodied soy protein bionanocomposites. *Polymer Composites*, **2017**, 38, E57-E65	3	6
37	Graphite-reinforced oxygen barrier conducting starch bionanocomposites. *Polymer Composites*, **2016**, 37, 2083-2091	3	6
36	Dispersion of nanoplatelets of graphite on PMMA matrix by in situ polymerisation technique. *Journal of Experimental Nanoscience*, **2014**, 9, 240-248	1.9	6
35	Ultrasound assisted process of PA6/clay nanocomposites: mechanical, rheological and barrier properties. *Journal of Polymer Engineering*, **2011**, 31,	1.4	6
34	Sonochemical Compatibility of Polyvinyl Alcohol/Polyacrylic Acid Blend in Aqueous Solution. *Journal of Macromolecular Science - Physics*, **2012**, 51, 580-589	1.4	6
33	Effect of graphene platelets on the thermal and conducting properties of poly(ethyl methacrylate). *Advances in Polymer Technology*, **2018**, 37, 1316-1322	1.9	5
32	Polypropylene oxide/polyethylene oxide-cellulose hybrid nanocomposite hydrogels as drug delivery vehicle. *Journal of Applied Polymer Science*, **2021**, 138, 49921	2.9	5
31	Delamination of Mg-Al Layered Double Hydroxide on Starch: Change in Structural and Thermal Properties. *Polymer-Plastics Technology and Engineering*, **2018**, 57, 1585-1591		4
30	h-BN huddled starch reinforced polyethylhexylacrylatepolyvinyl alcohol thin films for packaging applications. *Polymer Composites*, **2019**, 40, 1810-1818	3	4
29	Polymer-Based Bionanocomposites for Future Packaging Materials **2018**, 33-48		4
28	Antimicrobial Properties of Nanogold-Imprinted Starch Bionanocomposites. *Polymer-Plastics Technology and Engineering*, **2017**, 56, 334-345		3
27	Nano silver imprinted graphene oxide as catalyst in reduction of 4-nitrophenol. *Journal of Physical Organic Chemistry*, **2019**, 32, e3971	2.1	3
26	Nano ZrO2 reinforced cellulose incorporated polyethylmethacrylate/polyvinyl alcohol composite films as semiconducting packaging materials. *Journal of Applied Polymer Science*, **2020**, 137, 49284	2.9	3
25	Nanocellulose as a template for the production of advanced nanostructured material **2017**, 427-454		3

24	Surfactant free green synthesis of GOSiMa hybrid nanocomposite for charge storage application. *Ceramics International*, **2020**, 46, 27184-27192	5.1	3
23	Preparation, characterization and dielectric properties of GO based ZnO embedded mixed metal oxides ternary nanostructured composites. *Journal of Alloys and Compounds*, **2021**, 869, 159274	5.7	3
22	Nano ZnO imprinted dextran hybrid poly (N-isopropylacrylamide)/poly ethylene glycol composite hydrogels for in vitro release of ciprofloxacin. *Materials Today Communications*, **2021**, 26, 101869	2.5	3
21	Effect of SiC Nanoparticles on Thermal and Oxygen Barrier Properties of Albumin Bovine Protein. *Polymer-Plastics Technology and Engineering*, **2013**, 52, 940-945		2
20	Structural and mechanical properties of functionalized carbon nanofiber/epoxy nanocomposites. *Materials Today: Proceedings*, **2017**, 4, 9060-9064	1.4	2
19	Effect of polycaprolactone on physicochemical, biological, and mechanical properties of polyethylene oxide and polyamino acids nano block copolymers. *Journal of Applied Polymer Science*,52116	2.9	2
18	A materials science approach towards bioinspired polymeric nanocomposites: a comprehensive review. *International Journal of Polymeric Materials and Polymeric Biomaterials*,1-16	3	2
17	Nano-CaCO3-embodied polyacrylicacid/dextran nanocomposites for packaging applications. *Journal of Applied Polymer Science*, **2020**, 137, 48298	2.9	2
16	Sandwich-structured starch-grafted polyethylhexylacrylate/polyvinyl alcohol thin films. *Advances in Polymer Technology*, **2018**, 37, 3779-3791	1.9	2
15	Synthesis of Soy Protein Based Biocomposites for Packaging Applications. *Green Energy and Technology*, **2017**, 143-166	0.6	1
14	Carbohydrate-Based Nanohydrogels for Drug-Delivery Applications **2019**, 117-137		1
13	Nanostructured gold dispersed polyethylmethaacrylate/dextran hybrid composites for packaging applications. *Polymer-Plastics Technology and Materials*, **2019**, 58, 2019-2030	1.5	1
12	Nanostructured chitosan composites for cancer therapy: A review. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2018**, 67, 879-888	3	1
11	Characterization of Polyacrylonitrile Nanocomposites by Reinforcement of Functionalized Single-Walled Carbon Nanotubes. *Polymer-Plastics Technology and Engineering*, **2014**, 53, 784-789		1
10	Soy protein based biocomposites as ideal packaging materials **2021**, 65-84		1
9	Effect of layered graphene oxide on the structure and properties of bovine serum albumin grafted polyacrylonitrile hybrid bionanocomposites. *Polymer Composites*, **2019**, 40, 3989-4003	3	0
8	Chitosan-Based Nanobiocomposites for Wound-Healing Applications **2019**, 295-314		0
7	Change in Orientation of Polyacrylic Acid and Chitosan Networks by Imprintment of Gold Nanoparticles. *Polymer-Plastics Technology and Materials*, **2021**, 60, 182-194	1.5	0

6 Cellulose-Based Nanohydrogels for Tissue Engineering Applications **2017**, 67-90

5 Manufacturing of Chemically Modified Date Palm Leaf Fibre-Reinforced Polymer Composites **2015**, 291-308

4 Biobased Nanohydrogels for Controlled Drug Delivery. *Materials Horizons*, **2019**, 21-41 0.6

3 Oxygen Permeability of Layer Silicate Reinforced Polymer Nanocomposites. *Engineering Materials*, **2016**, 141-166 0.4

2 Microscopic Analysis and Characterization of Natural Rubber Containing Carbon Fillers **2019**, 225-251

1 Chitosan-Based Bionanocomposite for Packaging Applications **2018**, 107-124