

Bon-Cheol Ku

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112
papers

3,624
citations

29
h-index

57
g-index

119
ext. papers

4,086
ext. citations

5.9
avg, IF

5.34
L-index

#	Paper	IF	Citations
112	Solution-processable reduced graphene oxide as a novel alternative to PEDOT:PSS hole transport layers for highly efficient and stable polymer solar cells. <i>Advanced Materials</i> , 2011 , 23, 4923-8	24	332
111	Electrostatic Assembly of Conjugated Polymer Thin Layers on Electrospun Nanofibrous Membranes for Biosensors. <i>Nano Letters</i> , 2004 , 4, 331-334	11.5	311
110	Enhanced mechanical properties of silanized silica nanoparticle attached graphene oxide/epoxy composites. <i>Composites Science and Technology</i> , 2013 , 79, 115-125	8.6	281
109	In situ synthesis of the reduced graphene oxide-polyethyleneimine composite and its gas barrier properties. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 3739	13	192
108	Efficient synthesis of graphene sheets using pyrrole as a reducing agent. <i>Carbon</i> , 2011 , 49, 3497-3502	10.4	175
107	Structural Evolution of Polyacrylonitrile Fibers in Stabilization and Carbonization. <i>Advances in Chemical Engineering and Science</i> , 2012 , 02, 275-282	0.4	153
106	Mechanically Strong and Multifunctional Polyimide Nanocomposites Using Amimophenyl Functionalized Graphene Nanosheets. <i>Macromolecules</i> , 2013 , 46, 3505-3511	5.5	109
105	In situ synthesis of thermochemically reduced graphene oxide conducting nanocomposites. <i>Nano Letters</i> , 2012 , 12, 1789-93	11.5	98
104	Synthesis and properties of iodo functionalized graphene oxide/polyimide nanocomposites. <i>Composites Part B: Engineering</i> , 2014 , 56, 365-371	10	92
103	Preparation of water-dispersible graphene by facile surface modification of graphite oxide. <i>Nanotechnology</i> , 2011 , 22, 305710	3.4	82
102	Effects of various surfactants on the dispersion stability and electrical conductivity of surface modified graphene. <i>Journal of Alloys and Compounds</i> , 2013 , 562, 134-142	5.7	72
101	Tribological effects of fullerene (C60) nanoparticles added in mineral lubricants according to its viscosity. <i>International Journal of Precision Engineering and Manufacturing</i> , 2010 , 11, 607-611	1.7	68
100	Layer-by-layer assembled graphene oxide films and barrier properties of thermally reduced graphene oxide membranes. <i>Carbon Letters</i> , 2013 , 14, 247-250	2.3	63
99	Synthesis of an efficient white-light photocatalyst composite of graphene and ZnO nanoparticles: Application to methylene blue dye decomposition. <i>Applied Surface Science</i> , 2015 , 354, 55-65	6.7	61
98	Effect of functional groups of carbon nanotubes on the cyclization mechanism of polyacrylonitrile (PAN). <i>Polymer</i> , 2012 , 53, 2168-2174	3.9	60
97	High-modulus and strength carbon nanotube fibers using molecular cross-linking. <i>Carbon</i> , 2017 , 118, 413-421	10.4	57
96	Synthesis and characterization of highly-fluorinated colorless polyimides derived from 4,4'-((perfluoro-[1,1'-biphenyl]-4,4'-diyl)bis(oxy))bis(2,6-dimethylaniline) and aromatic dianhydrides. <i>Polymer</i> , 2015 , 76, 280-286	3.9	56

95	Grafting of Polyimide onto Chemically-Functionalized Graphene Nanosheets for Mechanically-Strong Barrier Membranes. <i>Chemistry of Materials</i> , 2015 , 27, 2040-2047	9.6	53
94	Large scale patternable 3-dimensional carbon nanotube/graphene structure for flexible Li-ion battery. <i>Carbon</i> , 2014 , 68, 493-500	10.4	45
93	Highly transparent and flexible NO ₂ gas sensor film based on MoS ₂ /rGO composites using soft lithographic patterning. <i>Applied Surface Science</i> , 2018 , 456, 7-12	6.7	41
92	Signal-Induced Release of Guests from a Photolabile Metal-Phenolic Supramolecular Cage and Its Hybrid Assemblies. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 5485-5489	16.4	38
91	Defect healing of reduced graphene oxide via intramolecular cross-dehydrogenative coupling. <i>Nanotechnology</i> , 2013 , 24, 185604	3.4	38
90	Synthesis and properties of thermally reduced graphene oxide/polyacrylonitrile composites. <i>Journal of Physics and Chemistry of Solids</i> , 2012 , 73, 741-743	3.9	37
89	Poly(arylate-phosphonate) copolymers with deoxybenzoin in the backbone: Synthesis, characterization, and thermal properties. <i>Journal of Polymer Science Part A</i> , 2007 , 45, 4573-4580	2.5	36
88	Thermal Conductivity of Polymer Composites With Geometric Characteristics of Carbon Allotropes. <i>Advanced Engineering Materials</i> , 2016 , 18, 1127-1132	3.5	35
87	Effects of functional group of carbon nanotubes on mechanical properties of carbon fibers. <i>Composites Part B: Engineering</i> , 2015 , 76, 159-166	10	34
86	Effects of reduction and polystyrene sulfate functionalization on the capacitive behaviour of thermally exfoliated graphene. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 5892	13	32
85	Effect of oxygen plasma treatment on the mechanical properties of carbon nanotube fibers. <i>Materials Letters</i> , 2015 , 156, 17-20	3.3	30
84	Synergistic toughening of polymer nanocomposites by hydrogen-bond assisted three-dimensional network of functionalized graphene oxide and carbon nanotubes. <i>Composites Science and Technology</i> , 2017 , 149, 228-234	8.6	30
83	Pyridine-functionalized graphene/polyimide nanocomposites; mechanical, gas barrier, and catalytic effects. <i>Composites Part B: Engineering</i> , 2017 , 114, 280-288	10	29
82	Layer-by-layer assembled polyelectrolyte-decorated graphene multilayer film for hydrogen gas barrier application. <i>Composites Part B: Engineering</i> , 2017 , 114, 339-347	10	26
81	Flame resistant electrospun polymer nanofibers from deoxybenzoin-based polymers. <i>Journal of Applied Polymer Science</i> , 2009 , 111, 301-307	2.9	26
80	A facile method for transparent carbon nanosheets heater based on polyimide. <i>RSC Advances</i> , 2016 , 6, 52509-52517	3.7	26
79	Fabrication and Applications of Carbon Nanotube Fibers. <i>Carbon Letters</i> , 2012 , 13, 191-204	2.3	25
78	Effect of defect-healing in graphene nanosheets on the mechanical properties of polyimide nanocomposites. <i>Carbon</i> , 2017 , 122, 614-621	10.4	24

77	Synergistic effects of oxidized CNTs and reactive oligomer on the fracture toughness and mechanical properties of epoxy. <i>Composites Part A: Applied Science and Manufacturing</i> , 2013 , 49, 58-67	8.4	24
76	Carbon nanotube fibers with enhanced longitudinal carrier mobility for high-performance all-carbon thermoelectric generators. <i>Nanoscale</i> , 2019 , 11, 16919-16927	7.7	23
75	Mechanical and electrical properties of thermochemically cross-linked polymer carbon nanotube fibers. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 91, 222-228	8.4	23
74	Effects of the functionalized graphene oxide on the oxygen barrier and mechanical properties of layer-by-layer assembled films. <i>Composites Part B: Engineering</i> , 2016 , 92, 307-314	10	23
73	Highly soluble polyimide based on asymmetric diamines containing trifluoromethyl group for high performance dielectric material. <i>Macromolecular Research</i> , 2018 , 26, 85-91	1.9	23
72	Thermomechanical and optical properties of molecularly controlled polyimides derived from ester derivatives. <i>Polymer</i> , 2017 , 108, 502-512	3.9	22
71	Synthesis and characterization of phosphorus- and sulfur-containing aromatic polyimides for high refractive index. <i>Polymer</i> , 2018 , 136, 143-148	3.9	21
70	A simple PAN-based fabrication method for microstructured carbon electrodes for organic field-effect transistors. <i>Carbon</i> , 2015 , 87, 257-268	10.4	21
69	Towards solution-processable, thermally robust, transparent polyimide-chain-end tethered organosilicate nanohybrids. <i>Composites Part B: Engineering</i> , 2019 , 163, 290-296	10	21
68	Facile Supramolecular Processing of Carbon Nanotubes and Polymers for Electromechanical Sensors. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 16180-16185	16.4	20
67	Synthesis and characterization of colorless polyimides derived from 4-(4-aminophenoxy)-2,6-dimethylaniline. <i>Macromolecular Research</i> , 2016 , 24, 1091-1097	1.9	19
66	Synergistic Effect of Sulfur and Chalcogen Atoms on the Enhanced Refractive Indices of Polyimides in the Visible and Near-Infrared Regions. <i>Macromolecules</i> , 2019 , 52, 827-834	5.5	19
65	Synthesis and characterization of high refractive index polyimides derived from 2,5-Bis(4-Aminophenylsulfanyl)-3,4-Ethylenedithiophene and aromatic dianhydrides. <i>Journal of Polymer Science Part A</i> , 2015 , 53, 944-950	2.5	18
64	Amino acids derived nitrogen-doped carbon materials for electrochemical capacitive energy storage. <i>Materials Letters</i> , 2015 , 145, 273-278	3.3	17
63	The efficient resolution of protected diols and hydroxy aldehydes by lipases: steric auxiliary approach and synthetic applications. <i>Bioorganic and Medicinal Chemistry Letters</i> , 1996 , 6, 71-76	2.9	17
62	Melt processable polyacrylonitrile copolymer precursors for carbon fibers: Rheological, thermal, and mechanical properties. <i>Journal of Industrial and Engineering Chemistry</i> , 2019 , 71, 112-118	6.3	16
61	Photoacoustic effect on the electrical and mechanical properties of polymer-infiltrated carbon nanotube fiber/graphene oxide composites. <i>Composites Science and Technology</i> , 2017 , 153, 136-144	8.6	15
60	Chemical method for improving both the electrical conductivity and mechanical properties of carbon nanotube yarn via intramolecular cross-dehydrogenative coupling. <i>ACS Applied Materials & Interfaces</i> , 2013 , 5, 7726-30	9.5	15

59	High yield and high concentration few-layer graphene sheets using solvent exfoliation of graphite with pre-thermal treatment in a sealed bath. <i>Materials Letters</i> , 2014 , 123, 90-92	3.3	15
58	Hydrophobic barrier: Molecular self-assembly of amphiphilic polyacetylenes within aluminosilicate nanoplatelets. <i>Journal of Membrane Science</i> , 2006 , 275, 12-16	9.6	15
57	Synthesis and properties of water soluble single-walled carbon nanotube graft ionic polyacetylene nanocomposites. <i>Polymer Composites</i> , 2009 , 30, 1817-1824	3	14
56	Carbon nanotube core graphitic shell hybrid fibers. <i>ACS Nano</i> , 2013 , 7, 10971-7	16.7	13
55	Highly efficient thermal oxidation and cross-linking reaction of catechol functionalized polyacrylonitrile copolymer composites for halogen-free flame retardant. <i>Composites Part B: Engineering</i> , 2020 , 184, 107687	10	13
54	Dimensionally stable and light-colored polyimide hybrid reinforced with layered silicate. <i>Macromolecular Research</i> , 2016 , 24, 104-113	1.9	12
53	Sustainable production of reduced graphene oxide using elemental sulfur for multifunctional composites. <i>Composites Part B: Engineering</i> , 2019 , 176, 107236	10	12
52	Green, fast, and scalable production of reduced graphene oxide via Taylor vortex flow. <i>Chemical Engineering Journal</i> , 2020 , 391, 123482	14.7	12
51	Methylpiperidine-functionalized graphene oxide for efficient curing acceleration and gas barrier of polymer nanocomposites. <i>Applied Surface Science</i> , 2019 , 464, 509-515	6.7	12
50	Synthesis of biologically-active reduced graphene oxide by using fucoidan as a multifunctional agent for combination cancer therapy. <i>Nanotechnology</i> , 2018 , 29, 475604	3.4	12
49	Preparation of UV-curable acryl resin for high refractive index based on 1,5-bis(2-acryloylenethyl)-3,4-ethylenedithiophene. <i>European Polymer Journal</i> , 2016 , 75, 303-309	5.2	11
48	Direct observation of morphological evolution of a catalyst during carbon nanotube forest growth: new insights into growth and growth termination. <i>Nanoscale</i> , 2016 , 8, 2055-62	7.7	11
47	Effects of nitrogen doping from pyrolyzed ionic liquid in carbon nanotube fibers: enhanced mechanical and electrical properties. <i>Nanotechnology</i> , 2015 , 26, 075706	3.4	11
46	Synthesis of colorless and highly refractive Poly(phenylene thioether ether) derived from 2,7-(4,4'-diphenol)thiothianthrene. <i>Polymer</i> , 2019 , 165, 191-197	3.9	10
45	Nanoforests composed of ZnO/C core-shell hexagonal nanosheets: fabrication and growth in a sealed thermolysis reactor and optical properties. <i>Journal of Materials Science</i> , 2015 , 50, 93-103	4.3	10
44	Effect of Carbon Nanofiber Structure on Crystallization Kinetics of Polypropylene/Carbon Nanofiber Composites. <i>Bulletin of the Korean Chemical Society</i> , 2011 , 32, 2369-2376	1.2	10
43	Tribological properties of carbon fiber-reinforced aluminum composites processed by spark plasma sintering. <i>Carbon Letters</i> , 2017 , 21, 103-106	2.3	10
42	Theoretical and experimental investigation of the wet-spinning process for mechanically strong carbon nanotube fibers. <i>Chemical Engineering Journal</i> , 2021 , 412, 128650	14.7	10

41	A facile synthesis method for highly water-dispersible reduced graphene oxide based on covalently linked pyridinium salt. <i>Carbon</i> , 2017 , 121, 17-24	10.4	9
40	Fabrication of a nanohybrid of conjugated polymer nanoparticles and graphene oxide for biosensing of trypsin. <i>Journal of Polymer Science Part A</i> , 2014 , 52, 1898-1904	2.5	9
39	The mechanical and electrical properties of carbon nanotube-grafted polyimide nanocomposites. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014 , 52, 960-966	2.6	9
38	SYNTHESIS AND ELECTROSPINNING OF A NOVEL FLUORESCENT POLYMER PMMA-PM FOR QUENCHING-BASED OPTICAL SENSING. <i>Journal of Macromolecular Science - Pure and Applied Chemistry</i> , 2002 , 39, 1241-1249	2.2	9
37	Atomically-thin molecular layers for electrode modification of organic transistors. <i>Nanoscale</i> , 2015 , 7, 14100-8	7.7	8
36	Molecular Design and Property Prediction of Sterically Confined Polyimides for Thermally Stable and Transparent Materials. <i>Polymers</i> , 2018 , 10,	4.5	8
35	Synthesis of Highly Dispersed and Conductive Graphene Sheets by Exfoliation of Preheated Graphite in a Sealed Bath and its Applications to Polyimide Nanocomposites. <i>Bulletin of the Korean Chemical Society</i> , 2014 , 35, 2049-2056	1.2	8
34	Influences of carboxyl functionalization of intercalators on exfoliation of graphite oxide: a molecular dynamics simulation. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 28616-28622	3.6	8
33	Synthesis and mechanistic study of in situ halogen/nitrogen dual-doping in graphene tailored by stepwise pyrolysis of ionic liquids. <i>Nanotechnology</i> , 2015 , 26, 115601	3.4	7
32	Catalyst and doping methods for arc graphene. <i>Nanotechnology</i> , 2014 , 25, 445601	3.4	7
31	Molecularly ordered structure and permeability properties of amphiphilic polyacetylene-multilayer nanocomposites. <i>Composites Science and Technology</i> , 2008 , 68, 3215-3219	8.6	7
30	Design, Synthesis and Electrospinning of a Novel Fluorescent Polymer for Optical Sensor Applications. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 708, 10451		7
29	Controlled synthesis of N-type single-walled carbon nanotubes with 100% of quaternary nitrogen. <i>Carbon</i> , 2020 , 167, 881-887	10.4	6
28	Preparation of Conjugated Polymer Dots as a Fluorescence Turn-On Assay for Bovine Serum Albumin by Interaction with Graphene Oxide. <i>Molecular Crystals and Liquid Crystals</i> , 2014 , 600, 170-178	0.5	5
27	Multifunctional aminoethylpiperazine-modified graphene oxide with high dispersion stability in polar solvents for mercury ion adsorption. <i>Journal of Industrial and Engineering Chemistry</i> , 2020 , 90, 224-231	6.3	5
26	Polyvinylidene Fluoride/Reduced Graphene Oxide Layers on SiOxNy/Poly(ethylene terephthalate) Films as Transparent Coatings for Organic Electronic Devices and Packaging Materials. <i>ACS Applied Nano Materials</i> , 2020 , 3, 8972-8981	5.6	5
25	Synergistic effect of UV and l-ascorbic acid on the reduction of graphene oxide: Reduction kinetics and quantum chemical simulations. <i>Solid State Sciences</i> , 2018 , 84, 120-125	3.4	5
24	Enhancement of electrical conductivity of carbon nanotube fibers by copper sulfide plating. <i>Fibers and Polymers</i> , 2015 , 16, 769-773	2	4

23	Mechanical and electrical properties of carbon nanotube fibers from impregnation with poly(vinyl alcohol)/poly(acrylic acid) and subsequent thermal condensation. <i>Polymer Composites</i> , 2018 , 39, 971-977 ³		4
22	Synthesis and preparation of alkyl-functionalized graphene oxide/polyimide nanocomposites. <i>Macromolecular Research</i> , 2014 , 22, 1344-1347	1.9	4
21	Aniline- and N,N-dimethylformamide-assisted processing route for graphite nanoplates: intercalation and exfoliation pathway. <i>Materials Letters</i> , 2011 , 65, 1371-1374	3.3	4
20	Electrical and Thermal Properties of Poly(p-phenylene sulfide) Reduced Graphite Oxide Nanocomposites. <i>Carbon Letters</i> , 2012 , 13, 221-225	2.3	4
19	Synthesis and characterization of polybenzoxazole/graphene oxide composites via in situ polymerization. <i>Carbon Letters</i> , 2013 , 14, 251-254	2.3	4
18	A facile in-situ activation of protonated histidine-derived porous carbon for electrochemical capacitive energy storage. <i>Journal of Industrial and Engineering Chemistry</i> , 2019 , 73, 316-327	6.3	4
17	The influence of oxidative debris on the fragmentation and laser desorption/ionization process of graphene oxide derivatives. <i>New Journal of Chemistry</i> , 2018 , 42, 12692-12697	3.6	4
16	Hierarchical structure control in solution spinning for strong and multifunctional carbon nanotube fibers. <i>Carbon</i> , 2022 , 196, 59-69	10.4	4
15	Mechanical properties enhanced by solid-state coupling reaction for molecular covalent bridges of carbon nanotube fibers. <i>Materials Letters</i> , 2018 , 211, 243-246	3.3	3
14	Highly efficient halogen-free flame retardants of thermally-oxidized polyacrylonitrile copolymers containing bio-derived caffeic acid derivatives. <i>Polymer Chemistry</i> , 2020 , 11, 6658-6669	4.9	3
13	Ultrahigh strength, modulus, and conductivity of graphitic fibers by macromolecular coalescence.. <i>Science Advances</i> , 2022 , 8, eabn0939	14.3	3
12	Synthesis and characterization of poly(cyclohexylthioacrylate) (PCTA) with high refractive index and low birefringence for optical applications. <i>Macromolecular Research</i> , 2015 , 23, 960-964	1.9	2
11	Enhanced Mechanical and Electrical Properties of Nitrogen Doped Carbon Nanotube Fibers Using Pyrolyzed Amino Acid. <i>Science of Advanced Materials</i> , 2017 , 9, 227-231	2.3	2
10	Study on the Relationship Between Evolved Gases in Carbonization of Stabilized Polyacrylonitrile Fibers with 12,000 Filaments and Their Mechanical Properties. <i>Science of Advanced Materials</i> , 2017 , 9, 1566-1571	2.3	2
9	Identification of Collapsed Carbon Nanotubes in High-Strength Fibers Spun from Compositionally Polydisperse Aerogels. <i>ACS Applied Nano Materials</i> , 2021 , 4, 6947-6955	5.6	2
8	Liquid Crystallinity of p-Aramid/Multi-walled Carbon Nanotube Composites. <i>Fibers and Polymers</i> , 2018 , 19, 1359-1362	2	2
7	High-flame retarding properties of polyacrylonitrile copolymer nanocomposites with synergistic effect of elemental sulfur-doped reduced graphene oxide and bio-derived catechol units. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021 , 148, 106477	8.4	2
6	Eggshell membrane hydrolysate as a multi-functional agent for synthesis of functionalized graphene analogue and its catalytic nanocomposites. <i>Journal of Industrial and Engineering Chemistry</i> , 2021 , 102, 233-240	6.3	2

5	Use of Pyrolyzed Amino Acids as Versatile Dopants for Synthesis of Heteroatoms-doped Graphenes. <i>Bulletin of the Korean Chemical Society</i> , 2015 , 36, 1508-1511	1.2	1
4	Advances in liquid crystalline nano-carbon materials: preparation of nano-carbon based lyotropic liquid crystal and their fabrication of nano-carbon fibers with liquid crystalline spinning. <i>Carbon Letters</i> , 2015 , 16, 223-232	2.3	1
3	Carbon nanotube fibers with high specific electrical conductivity: Synergistic effect of heteroatom doping and densification. <i>Carbon</i> , 2021 , 184, 207-213	10.4	1
2	Analysis of the effect of organic solvent-sheet interfacial interaction on the exfoliation of sulfur-doped reduced graphene oxide sheets in a solvent system using molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 20665-20672	3.6	0
1	Synthesis of Polyaniline Using Electrostatically Layered Hematin Assemblies. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 708, 10121		