

Heon Sang Lee

List of Publications by Year in descending order

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81
papers

3,165
citations

172457

29
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161849

54
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83
all docs

83
docs citations

83
times ranked

4524
citing authors

#	ARTICLE	IF	CITATIONS
1	High-Resolution 3D Printing of Mechanically Tough Hydrogels Prepared by Thermo-Responsive Poxamer Ink Platform. <i>Macromolecular Rapid Communications</i> , 2022, 43, e2100579.	3.9	7
2	Brush-painted superhydrophobic silica coating layers for self-cleaning solar panels. <i>Journal of Industrial and Engineering Chemistry</i> , 2022, 106, 460-468.	5.8	14
3	Ultrahigh strength, modulus, and conductivity of graphitic fibers by macromolecular coalescence. <i>Science Advances</i> , 2022, 8, eabn0939.	10.3	34
4	Hierarchical structure control in solution spinning for strong and multifunctional carbon nanotube fibers. <i>Carbon</i> , 2022, 196, 59-69.	10.3	28
5	Theoretical and experimental investigation of the wet-spinning process for mechanically strong carbon nanotube fibers. <i>Chemical Engineering Journal</i> , 2021, 412, 128650.	12.7	27
6	Orientation effect on the rheology of graphene oxide dispersions in isotropic phase, ordered isotropic biphasic, and discotic phase. <i>Journal of Rheology</i> , 2021, 65, 791-806.	2.6	10
7	Rotational motions of repulsive graphene oxide domains in aqueous dispersion during slow shear flow. <i>Journal of Rheology</i> , 2020, 64, 29-41.	2.6	9
8	Polyvinylidene Fluoride/Reduced Graphene Oxide Layers on SiO ₂ /N/Poly(ethylene terephthalate) Films as Transparent Coatings for Organic Electronic Devices and Packaging Materials. <i>ACS Applied Nano Materials</i> , 2020, 3, 8972-8981.	5.0	9
9	Sustainable production of reduced graphene oxide using elemental sulfur for multifunctional composites. <i>Composites Part B: Engineering</i> , 2019, 176, 107236.	12.0	20
10	Tube-rolling and formation of mechanically robust micro-tubes in graphene oxide aqueous dispersions during shear flow. <i>Soft Matter</i> , 2019, 15, 4238-4243.	2.7	1
11	Concentration Dependence of the Extensional Relaxation Time and Finite Extensibility in Dilute and Semidilute Polymer Solutions Using a Microfluidic Rheometer. <i>Macromolecules</i> , 2019, 52, 9585-9593.	4.8	7
12	Methylpiperidine-functionalized graphene oxide for efficient curing acceleration and gas barrier of polymer nanocomposites. <i>Applied Surface Science</i> , 2019, 464, 509-515.	6.1	17
13	Human-Like Aperture and Sphincter Muscle Comprising Hyperelastic Composite Hydrogels Containing Graphene Oxide. <i>Macromolecular Materials and Engineering</i> , 2019, 304, 1800560.	3.6	5
14	Elastic particle deformation in rectangular channel flow as a measure of particle stiffness. <i>Soft Matter</i> , 2018, 14, 216-227.	2.7	11
15	Steady-state extensional viscosity of a linear polymer solution using a differential pressure extensional rheometer on a chip. <i>Journal of Rheology</i> , 2018, 62, 1261-1270.	2.6	22
16	Fabrication of high-quality or highly porous graphene sheets from exfoliated graphene oxide via reactions in alkaline solutions. <i>Carbon</i> , 2018, 138, 219-226.	10.3	26
17	Synthesis of Poly(N-isopropylacrylamide) Micro-hydrogel Using a Microfluidic Channel and Study on Concentration Sensor. <i>Porrime</i> , 2018, 42, 1052-1058.	0.2	1
18	Pyridine-functionalized graphene/polyimide nanocomposites; mechanical, gas barrier, and catalytic effects. <i>Composites Part B: Engineering</i> , 2017, 114, 280-288.	12.0	37

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19	Lateral diffusion of graphene oxides in water and the size effect on the orientation of dispersions and electrical conductivity. <i>Carbon</i> , 2017, 125, 280-288.	10.3	19
20	A differential pressure extensional rheometer on a chip with fully developed elongational flow. <i>Journal of Rheology</i> , 2017, 61, 1049-1059.	2.6	23
21	Generation and characterization of monodisperse deformable alginate and pNIPAM microparticles with a wide range of shear moduli. <i>Soft Matter</i> , 2017, 13, 5785-5794.	2.7	13
22	Highly bendable bilayer-type photo-actuators comprising of reduced graphene oxide dispersed in hydrogels. <i>Scientific Reports</i> , 2016, 6, 20921.	3.3	92
23	Tailored CVD graphene coating as a transparent and flexible gas barrier. <i>Scientific Reports</i> , 2016, 6, 24143.	3.3	38
24	Pulmonary Responses of Sprague-Dawley Rats in Single Inhalation Exposure to Graphene Oxide Nanomaterials. <i>BioMed Research International</i> , 2015, 2015, 1-9.	1.9	33
25	5-Day repeated inhalation and 28-day post-exposure study of graphene. <i>Nanotoxicology</i> , 2015, 9, 1023-1031.	3.0	44
26	Kinetics of hydrazine reduction of thin films of graphene oxide and the determination of activation energy by the measurement of electrical conductivity. <i>RSC Advances</i> , 2015, 5, 102567-102573.	3.6	18
27	Energy Efficient Glazing for Adaptive Solar Control Fabricated with Photothermotropic Hydrogels Containing Graphene Oxide. <i>Scientific Reports</i> , 2015, 5, 7646.	3.3	58
28	Grafting of Polyimide onto Chemically-Functionalized Graphene Nanosheets for Mechanically-Strong Barrier Membranes. <i>Chemistry of Materials</i> , 2015, 27, 2040-2047.	6.7	60
29	Fingertip skin-inspired microstructured ferroelectric skins discriminate static/dynamic pressure and temperature stimuli. <i>Science Advances</i> , 2015, 1, e1500661.	10.3	704
30	Determination of molecular weight distribution and composition dependence of monomeric friction factors from the stress relaxation of ultrahigh molecular weight polyethylene gels. <i>Journal of Rheology</i> , 2015, 59, 1173-1189.	2.6	11
31	Investigation of Mechanical and Thermal Properties of Poly(N-isopropylacrylamide) Hydrogels Containing Graphene Oxide. <i>Porrime</i> , 2015, 39, 788.	0.2	1
32	Crystallization of polycarbonate in solvent/nonsolvent system and its application to high-density polyethylene composite as a filler. <i>Polymer Engineering and Science</i> , 2014, 54, 1893-1899.	3.1	6
33	Remote control of volume phase transition of hydrogels containing graphene oxide by visible light irradiation. <i>RSC Advances</i> , 2014, 4, 25379-25383.	3.6	30
34	Effects of multi-walled carbon nanotube (MWCNT) dispersion and compatibilizer on the electrical and rheological properties of polycarbonate/poly(acrylonitrile-butadiene-styrene)/MWCNT composites. <i>Journal of Materials Science</i> , 2014, 49, 4522-4529.	3.7	40
35	Method Development to Evaluate Melting Behavior of Glass Fiber-Reinforced Syndiotactic Polystyrene Composites in the Presence of Pressure Loading. <i>Polymer-Plastics Technology and Engineering</i> , 2014, 53, 1028-1034.	1.9	2
36	Oscillatory shear induced gelation of graphene-poly(vinyl alcohol) composite hydrogels and rheological premonitor of ultra-light aerogels. <i>Polymer</i> , 2014, 55, 287-294.	3.8	19

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37	Water and oxygen permeation through transparent ethylene vinyl alcohol/(graphene oxide) membranes. Carbon Letters, 2014, 15, 50-56.	5.9	21
38	Thermal properties in strong hydrogen bonding systems composed of poly(vinyl alcohol), polyethyleneimine, and graphene oxide. Carbon Letters, 2014, 15, 282-289.	5.9	18
39	Effects of compatibilizers on the mechanical, morphological, and thermal properties of poly(propylene carbonate)/poly(methyl methacrylate) blends. Macromolecular Research, 2013, 21, 1182-1187.	2.4	18
40	Size of a crystal nucleus in the isothermal crystallization of supercooled liquid. Journal of Chemical Physics, 2013, 139, 104909.	3.0	8
41	Negative normal stress differences in graphene/polycarbonate composites. Applied Physics Letters, 2012, 100, .	3.3	14
42	The effect of bernard-marangoni convection on percolation threshold in amorphous polymer-multiwall carbon nanotube composites. Current Applied Physics, 2012, 12, 467-472.	2.4	7
43	Bent-shape effects of multi-walled carbon nanotube on the electrical conductivity and rheological properties of polycarbonate/multi-walled carbon nanotube nanocomposites. Synthetic Metals, 2011, 161, 1629-1634.	3.9	8
44	Transparent and high gas barrier films based on poly(vinyl alcohol)/graphene oxide composites. Thin Solid Films, 2011, 519, 7766-7771.	1.8	138
45	The effect of mesoscopic shape on thermal properties of multi-walled carbon nanotube mats. Current Applied Physics, 2011, 11, 1144-1148.	2.4	18
46	Percolation of two-dimensional multiwall carbon nanotube networks. Applied Physics Letters, 2009, 95, 134104.	3.3	19
47	Effects of Fiber Characteristics on the Rheological and Mechanical Properties of Polycarbonate/Carbon Fiber Composites. Composite Interfaces, 2009, 16, 477-491.	2.3	10
48	Effects of silicone surfactant on the cell size and thermal conductivity of rigid polyurethane foams by environmentally friendly blowing agents. Macromolecular Research, 2009, 17, 44-50.	2.4	60
49	Effect of multi-walled carbon nanotube dispersion on the electrical, morphological and rheological properties of polycarbonate/multi-walled carbon nanotube composites. Macromolecular Research, 2009, 17, 863-869.	2.4	58
50	Effects of filler characteristics and processing conditions on the electrical, morphological and rheological properties of PE and PP with conductive filler composites. Macromolecular Research, 2009, 17, 110-115.	2.4	15
51	Effects of PP-g-MAH on the Mechanical, morphological and rheological properties of polypropylene and poly(acrylonitrile-butadiene-styrene) blends. Macromolecular Research, 2009, 17, 417-423.	2.4	35
52	Electrical, morphological and rheological properties of carbon nanotube composites with polyethylene and poly(phenylene sulfide) by melt mixing. Chemical Engineering Science, 2009, 64, 4649-4656.	3.8	69
53	Nitrogen doping effects on the structure behavior and the field emission performance of double-walled carbon nanotubes. Carbon, 2009, 47, 169-177.	10.3	90
54	A simple and highly effective process for the purification of single-walled carbon nanotubes synthesized with arc-discharge. Carbon, 2009, 47, 3544-3549.	10.3	28

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55	Electrically conductive transparent papers using multiwalled carbon nanotubes. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 1235-1242.	2.1	72
56	Translational and Rotational Diffusions of Multiwalled Carbon Nanotubes with Static Bending. <i>Journal of Physical Chemistry C</i> , 2008, 112, 10653-10658.	3.1	25
57	Dispersion of Multiwalled Carbon Nanotubes in Aqueous Silk Fibroin Solutions. <i>Journal of Nanoscience and Nanotechnology</i> , 2008, 8, 5543-5546.	0.9	4
58	Persistence Length of Multiwalled Carbon Nanotubes with Static Bending. <i>Journal of Physical Chemistry C</i> , 2007, 111, 18882-18887.	3.1	66
59	High-Quality Single-Walled Carbon Nanotubes Synthesized by Catalytic Decomposition of Xylene over Fe ³⁺ /Mo/MgO Catalyst and Their Field Emission Properties. <i>Journal of Physical Chemistry C</i> , 2007, 111, 12954-12959.	3.1	13
60	Effects of clay on the morphology of poly(acrylonitrile-butadiene-styrene) and polypropylene nanocomposites. <i>Polymer Engineering and Science</i> , 2007, 47, 1671-1677.	3.1	36
61	Effects of compatibilizer on mechanical, morphological, and rheological properties of polypropylene/poly(acrylonitrile-butadiene-styrene) blends. <i>Macromolecular Research</i> , 2007, 15, 308-314.	2.4	40
62	Rheological and electrical properties of polycarbonate/multi-walled carbon nanotube composites. <i>Polymer</i> , 2006, 47, 4434-4439.	3.8	157
63	Effects of morphology on the electrical and mechanical properties of the polycarbonate/multi-walled carbon nanotube composites. <i>Macromolecular Research</i> , 2006, 14, 456-460.	2.4	45
64	Synthesis and properties of polyurethane/clay nanocomposite by clay modified with polymeric methane diisocyanate. <i>Journal of Applied Polymer Science</i> , 2006, 101, 2879-2883.	2.6	48
65	Dynamic mechanical and morphological properties of polycarbonate/multi-walled carbon nanotube composites. <i>Polymer</i> , 2005, 46, 5656-5661.	3.8	84
66	Effects of crystallinity and crosslinking on the thermal and rheological properties of ethylene vinyl acetate copolymer. <i>Polymer</i> , 2005, 46, 11844-11848.	3.8	97
67	Linear Viscoelasticity and the Measurement of Interfacial Tension in a Partially Miscible Polymer Mixture. <i>Macromolecules</i> , 2005, 38, 1196-1200.	4.8	12
68	Properties of water-blown rigid polyurethane foams with reactivity of raw materials. <i>Journal of Applied Polymer Science</i> , 2004, 93, 2334-2342.	2.6	61
69	Rheological properties and interfacial tension of polypropylene-poly(styrene-co-acrylonitrile) blend containing compatibilizer. <i>Polymer</i> , 2003, 44, 1681-1687.	3.8	77
70	Blends of linear and branched polyethylenes. <i>Polymer Engineering and Science</i> , 2000, 40, 1132-1142.	3.1	61
71	The deformation and retraction of thermotropic LCP droplets in a flexible polymer matrix. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2000, 93, 315-323.	2.4	12
72	Thermal properties of melt-blended poly(ether ether ketone) and poly(ether imide). <i>Journal of Applied Polymer Science</i> , 1999, 72, 733-739.	2.6	15

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73	Rheology of a viscoelastic emulsion with a liquid crystalline polymer dispersed phase. Journal of Rheology, 1999, 43, 1583-1598.	2.6	22
74	Thermal properties of melt-blended poly(ether ether ketone) and poly(ether imide). Journal of Applied Polymer Science, 1999, 72, 733-739.	2.6	1
75	Blends of a thermotropic liquid crystalline polymer and some flexible chain polymers and the determination of the polymer-polymer interaction parameter of the two polymers. Polymer Bulletin, 1998, 41, 387-394.	3.3	13
76	Glass transition temperatures and rigid amorphous fraction of poly(ether ether ketone) and poly(ether imide) blends. Polymer, 1997, 38, 2657-2663.	3.8	31
77	Determination of the Flory-Huggins interaction parameter of polystyrene/polybutadiene blends by thermal analysis. Journal of Applied Polymer Science, 1997, 64, 1301-1308.	2.6	16
78	Thermal behavior and the determination of the polymer-polymer interaction parameter of polycarbonate and a thermotropic liquid crystalline polymer blends. Polymer Bulletin, 1996, 37, 503-510.	3.3	8
79	Thermal properties and morphology of blends of poly(ether imide) and polycarbonate. Polymer Engineering and Science, 1996, 36, 2694-2702.	3.1	15
80	Mass Production of 2D Manifolds of Graphene Oxide by Shear Flow. Advanced Functional Materials, 0, , 2107694.	14.9	2
81	Simulated orientational morphology from the measured transient rheology of polycarbonate-carbon fiber composites. Korea Australia Rheology Journal, 0, , .	1.7	0