Heon Sang Lee

List of Publications by Year
in descending order

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81 papers	3,165 citations	196777 29 h-index	182931 54 g-index
83 all docs	83 docs citations	83 times ranked	5246 citing authors

#	Article	IF	Citations
1	Highâ€Resolution 3D Printing of Mechanically Tough Hydrogels Prepared by Thermoâ€Responsive Poloxamer Ink Platform. Macromolecular Rapid Communications, 2022, 43, e2100579.	2.0	7
2	Brush-painted superhydrophobic silica coating layers for self-cleaning solar panels. Journal of Industrial and Engineering Chemistry, 2022, 106, 460-468.	2.9	14
3	Ultrahigh strength, modulus, and conductivity of graphitic fibers by macromolecular coalescence. Science Advances, 2022, 8, eabn0939.	4.7	34
4	Hierarchical structure control in solution spinning for strong and multifunctional carbon nanotube fibers. Carbon, 2022, 196, 59-69.	5.4	28
5	Theoretical and experimental investigation of the wet-spinning process for mechanically strong carbon nanotube fibers. Chemical Engineering Journal, 2021, 412, 128650.	6.6	27
6	Orientation effect on the rheology of graphene oxide dispersions in isotropic phase, ordered isotropic biphase, and discotic phase. Journal of Rheology, 2021, 65, 791-806.	1.3	10
7	Rotational motions of repulsive graphene oxide domains in aqueous dispersion during slow shear flow. Journal of Rheology, 2020, 64, 29-41.	1.3	9
8	Polyvinylidene Fluoride/Reduced Graphene Oxide Layers on SiO_xN_y/Poly(ethylene terephthalate) Films as Transparent Coatings for Organic Electronic Devices and Packaging Materials. ACS Applied Nano Materials, 2020, 3, 8972-8981.	2.4	9
9	Sustainable production of reduced graphene oxide using elemental sulfur for multifunctional composites. Composites Part B: Engineering, 2019, 176, 107236.	5.9	20
10	Tube-rolling and formation of mechanically robust micro-tubes in graphene oxide aqueous dispersions during shear flow. Soft Matter, 2019, 15, 4238-4243.	1.2	1
11	Concentration Dependence of the Extensional Relaxation Time and Finite Extensibility in Dilute and Semidilute Polymer Solutions Using a Microfluidic Rheometer. Macromolecules, 2019, 52, 9585-9593.	2.2	7
12	Methylpiperidine-functionalized graphene oxide for efficient curing acceleration and gas barrier of polymer nanocomposites. Applied Surface Science, 2019, 464, 509-515.	3.1	17
13	Humanâ€Irisâ€Like Aperture and Sphincter Muscle Comprising Hyperelastic Composite Hydrogels Containing Graphene Oxide. Macromolecular Materials and Engineering, 2019, 304, 1800560.	1.7	5
14	Elastic particle deformation in rectangular channel flow as a measure of particle stiffness. Soft Matter, 2018, 14, 216-227.	1.2	11
15	Steady-state extensional viscosity of a linear polymer solution using a differential pressure extensional rheometer on a chip. Journal of Rheology, 2018, 62, 1261-1270.	1.3	22
16	Fabrication of high-quality or highly porous graphene sheets from exfoliated graphene oxide via reactions in alkaline solutions. Carbon, 2018, 138, 219-226.	5.4	26
17	Synthesis of Poly(N-isopropylacrylamide) Micro-hydrogel Using a Microfluidic Channel and Study on Concentration Sensor. Porrime, 2018, 42, 1052-1058.	0.0	1
18	Pyridine-functionalized graphene/polyimide nanocomposites; mechanical, gas barrier, and catalytic effects. Composites Part B: Engineering, 2017, 114, 280-288.	5.9	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. Carbon, 2017, 125, 280-288.	5.4	19
20	A differential pressure extensional rheometer on a chip with fully developed elongational flow. Journal of Rheology, 2017, 61, 1049-1059.	1.3	23
21	Generation and characterization of monodisperse deformable alginate and pNIPAM microparticles with a wide range of shear moduli. Soft Matter, 2017, 13, 5785-5794.	1.2	13
22	Highly bendable bilayer-type photo-actuators comprising of reduced graphene oxide dispersed in hydrogels. Scientific Reports, 2016, 6, 20921.	1.6	92
23	Tailored CVD graphene coating as a transparent and flexible gas barrier. Scientific Reports, 2016, 6, 24143.	1.6	38
24	Pulmonary Responses of Sprague-Dawley Rats in Single Inhalation Exposure to Graphene Oxide Nanomaterials. BioMed Research International, 2015, 2015, 1-9.	0.9	33
25	5-Day repeated inhalation and 28-day post-exposure study of graphene. Nanotoxicology, 2015, 9, 1023-1031.	1.6	44
26	Kinetics of hydrazine reduction of thin films of graphene oxide and the determination of activation energy by the measurement of electrical conductivity. RSC Advances, 2015, 5, 102567-102573.	1.7	18
27	Energy Efficient Glazing for Adaptive Solar Control Fabricated with Photothermotropic Hydrogels Containing Graphene Oxide. Scientific Reports, 2015, 5, 7646.	1.6	58
28	Grafting of Polyimide onto Chemically-Functionalized Graphene Nanosheets for Mechanically-Strong Barrier Membranes. Chemistry of Materials, 2015, 27, 2040-2047.	3.2	60
29	Fingertip skinâ€“inspired microstructured ferroelectric skins discriminate static/dynamic pressure and temperature stimuli. Science Advances, 2015, 1, e1500661.	4.7	704
30	Determination of molecular weight distribution and composition dependence of monomeric friction factors from the stress relaxation of ultrahigh molecular weight polyethylene gels. Journal of Rheology, 2015, 59, 1173-1189.	1.3	11
31	Investigation of Mechanical and Thermal Properties of Poly(N-isopropylacrylamide) Hydrogels Containing Graphene Oxide. Porrime, 2015, 39, 788.	0.0	1
32	Crystallization of polycarbonate in solvent/nonsolvent system and its application to highâ€density polyethylene composite as a filler. Polymer Engineering and Science, 2014, 54, 1893-1899.	1.5	6
33	Remote control of volume phase transition of hydrogels containing graphene oxide by visible light irradiation. RSC Advances, 2014, 4, 25379-25383.	1.7	30
34	Effects of multi-walled carbon nanotube (MWCNT) dispersion and compatibilizer on the electrical and rheological properties of polycarbonate/poly(acrylonitrileâ€“butadieneâ€“styrene)/MWCNT composites. Journal of Materials Science, 2014, 49, 4522-4529.	1.7	40
35	Method Development to Evaluate Melting Behavior of Glass Fiber-Reinforced Syndiotactic Polystyrene Composites in the Presence of Pressure Loading. Polymer-Plastics Technology and Engineering, 2014, 53, 1028-1034.	1.9	2
36	Oscillatory shear induced gelation of grapheneâ€“poly(vinyl alcohol) composite hydrogels and rheological premonitor of ultra-light aerogels. Polymer, 2014, 55, 287-294.	1.8	19

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37	Water and oxygen permeation through transparent ethylene vinyl alcohol/(graphene oxide) membranes. Carbon Letters, 2014, 15, 50-56.	3.3	21
38	Thermal properties in strong hydrogen bonding systems composed of poly(vinyl alcohol), polyethyleneimine, and graphene oxide. Carbon Letters, 2014, 15, 282-289.	3.3	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.	1.0	18
40	Size of a crystal nucleus in the isothermal crystallization of supercooled liquid. Journal of Chemical Physics, 2013, 139, 104909.	1.2	8
41	Negative normal stress differences in graphene/polycarbonate composites. Applied Physics Letters, 2012, 100, .	1.5	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.	1.1	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.	2.1	8
44	Transparent and high gas barrier films based on poly(vinyl alcohol)/graphene oxide composites. Thin Solid Films, 2011, 519, 7766-7771.	0.8	138
45	The effect of mesoscopic shape on thermal properties of multi-walled carbon nanotube mats. Current Applied Physics, 2011, 11, 1144-1148.	1.1	18
46	Percolation of two-dimensional multiwall carbon nanotube networks. Applied Physics Letters, 2009, 95, 134104.	1.5	19
47	Effects of Fiber Characteristics on the Rheological and Mechanical Properties of Polycarbonate/Carbon Fiber Composites. Composite Interfaces, 2009, 16, 477-491.	1.3	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.	1.0	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.	1.0	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.	1.0	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.	1.0	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.	1.9	69
53	Nitrogen doping effects on the structure behavior and the field emission performance of double-walled carbon nanotubes. Carbon, 2009, 47, 169-177.	5.4	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.	5.4	28

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55	Electrically conductive transparent papers using multiwalled carbon nanotubes. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 1235-1242.	2.4	72
56	Translational and Rotational Diffusions of Multiwalled Carbon Nanotubes with Static Bending. Journal of Physical Chemistry C, 2008, 112, 10653-10658.	1.5	25
57	Dispersion of Multiwalled Carbon Nanotubes in Aqueous Silk Fibroin Solutions. Journal of Nanoscience and Nanotechnology, 2008, 8, 5543-5546.	0.9	4
58	Persistence Length of Multiwalled Carbon Nanotubes with Static Bending. Journal of Physical Chemistry C, 2007, 111, 18882-18887.	1.5	66
59	High-Quality Single-Walled Carbon Nanotubes Synthesized by Catalytic Decomposition of Xylene over Feâ^Mo/MgO Catalyst and Their Field Emission Properties. Journal of Physical Chemistry C, 2007, 111, 12954-12959.	1.5	13
60	Effects of clay on the morphology of poly(acrylonitrileâ€butadieneâ€styrene) and polypropylene nanocomposites. Polymer Engineering and Science, 2007, 47, 1671-1677.	1.5	36
61	Effects of compatibilizer on mechanical, morphological, and rheological properties of polypropylene/poly(acrylonitrile-butadiene-styrene) blends. Macromolecular Research, 2007, 15, 308-314.	1.0	40
62	Rheological and electrical properties of polycarbonate/multi-walled carbon nanotube composites. Polymer, 2006, 47, 4434-4439.	1.8	157
63	Effects of morphology on the electrical and mechanical properties of the polycarbonate/multi-walled carbon nanotube composites. Macromolecular Research, 2006, 14, 456-460.	1.0	45
64	Synthesis and properties of polyurethane/clay nanocomposite by clay modified with polymeric methane diisocyanate. Journal of Applied Polymer Science, 2006, 101, 2879-2883.	1.3	48
65	Dynamic mechanical and morphological properties of polycarbonate/multi-walled carbon nanotube composites. Polymer, 2005, 46, 5656-5661.	1.8	84
66	Effects of crystallinity and crosslinking on the thermal and rheological properties of ethylene vinyl acetate copolymer. Polymer, 2005, 46, 11844-11848.	1.8	97
67	Linear Viscoelasticity and the Measurement of Interfacial Tension in a Partially Miscible Polymer Mixture. Macromolecules, 2005, 38, 1196-1200.	2.2	12
68	Properties of water-blown rigid polyurethane foams with reactivity of raw materials. Journal of Applied Polymer Science, 2004, 93, 2334-2342.	1.3	61
69	Rheological properties and interfacial tension of polypropyleneâ€“poly(styrene-co-acrylonitrile) blend containing compatibilizer. Polymer, 2003, 44, 1681-1687.	1.8	77
70	Blends of linear and branched polyethylenes. Polymer Engineering and Science, 2000, 40, 1132-1142.	1.5	61
71	The deformation and retraction of thermotropic LCP droplets in a flexible polymer matrix. Journal of Non-Newtonian Fluid Mechanics, 2000, 93, 315-323.	1.0	12
72	Thermal properties of melt-blended poly(ether ether ketone) and poly(ether imide). Journal of Applied Polymer Science, 1999, 72, 733-739.	1.3	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.	1.3	22
74	Thermal properties of melt-blended poly(ether ether ketone) and poly(ether imide). , 1999, 72, 733.		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.	1.7	13
76	Glass transition temperatures and rigid amorphous fraction of poly(ether ether ketone) and poly(ether imide) blends. Polymer, 1997, 38, 2657-2663.	1.8	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.	1.3	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.	1.7	8
79	Thermal properties and morphology of blends of poly(ether imide) and polycarbonate. Polymer Engineering and Science, 1996, 36, 2694-2702.	1.5	15
80	Mass Production of 2D Manifolds of Graphene Oxide by Shear Flow. Advanced Functional Materials, 0, , 2107694.	7.8	2
81	Simulated orientational morphology from the measured transient rheology of polycarbonateâ€“carbon fiber composites. Korea Australia Rheology Journal, 0, , .	0.7	0