# Heon Sang Lee

List of Publications by Year
in descending order

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|---|---|---|---|
| 81 papers | 3,165 citations | 172457 29 h-index | 161849 54 g-index |
| 83 all docs | 83 docs citations | 83 times ranked | 4524 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Fingertip skinâ€“inspired microstructured ferroelectric skins discriminate static/dynamic pressure and temperature stimuli. Science Advances, 2015, 1, e1500661. | 10.3 | 704 |
| 2 | Rheological and electrical properties of polycarbonate/multi-walled carbon nanotube composites. Polymer, 2006, 47, 4434-4439. | 3.8 | 157 |
| 3 | Transparent and high gas barrier films based on poly(vinyl alcohol)/graphene oxide composites. Thin Solid Films, 2011, 519, 7766-7771. | 1.8 | 138 |
| 4 | Effects of crystallinity and crosslinking on the thermal and rheological properties of ethylene vinyl acetate copolymer. Polymer, 2005, 46, 11844-11848. | 3.8 | 97 |
| 5 | Highly bendable bilayer-type photo-actuators comprising of reduced graphene oxide dispersed in hydrogels. Scientific Reports, 2016, 6, 20921. | 3.3 | 92 |
| 6 | 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 |
| 7 | Dynamic mechanical and morphological properties of polycarbonate/multi-walled carbon nanotube composites. Polymer, 2005, 46, 5656-5661. | 3.8 | 84 |
| 8 | Rheological properties and interfacial tension of polypropyleneâ€“poly(styrene-co-acrylonitrile) blend containing compatibilizer. Polymer, 2003, 44, 1681-1687. | 3.8 | 77 |
| 9 | Electrically conductive transparent papers using multiwalled carbon nanotubes. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 1235-1242. | 2.1 | 72 |
| 10 | 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 |
| 11 | Persistence Length of Multiwalled Carbon Nanotubes with Static Bending. Journal of Physical Chemistry C, 2007, 111, 18882-18887. | 3.1 | 66 |
| 12 | Blends of linear and branched polyethylenes. Polymer Engineering and Science, 2000, 40, 1132-1142. | 3.1 | 61 |
| 13 | Properties of water-blown rigid polyurethane foams with reactivity of raw materials. Journal of Applied Polymer Science, 2004, 93, 2334-2342. | 2.6 | 61 |
| 14 | 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 |
| 15 | Grafting of Polyimide onto Chemically-Functionalized Graphene Nanosheets for Mechanically-Strong Barrier Membranes. Chemistry of Materials, 2015, 27, 2040-2047. | 6.7 | 60 |
| 16 | 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 |
| 17 | Energy Efficient Glazing for Adaptive Solar Control Fabricated with Photothermotropic Hydrogels Containing Graphene Oxide. Scientific Reports, 2015, 5, 7646. | 3.3 | 58 |
| 18 | Synthesis and properties of polyurethane/clay nanocomposite by clay modified with polymeric methane diisocyanate. Journal of Applied Polymer Science, 2006, 101, 2879-2883. | 2.6 | 48 |

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|---|---|---|---|
| 19 | Effects of morphology on the electrical and mechanical properties of the polycarbonate/multi-walled carbon nanotube composites. Macromolecular Research, 2006, 14, 456-460. | 2.4 | 45 |
| 20 | 5-Day repeated inhalation and 28-day post-exposure study of graphene. Nanotoxicology, 2015, 9, 1023-1031. | 3.0 | 44 |
| 21 | Effects of compatibilizer on mechanical, morphological, and rheological properties of polypropylene/poly(acrylonitrile-butadiene-styrene) blends. Macromolecular Research, 2007, 15, 308-314. | 2.4 | 40 |
| 22 | 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. | 3.7 | 40 |
| 23 | Tailored CVD graphene coating as a transparent and flexible gas barrier. Scientific Reports, 2016, 6, 24143. | 3.3 | 38 |
| 24 | Pyridine-functionalized graphene/polyimide nanocomposites; mechanical, gas barrier, and catalytic effects. Composites Part B: Engineering, 2017, 114, 280-288. | 12.0 | 37 |
| 25 | Effects of clay on the morphology of poly(acrylonitrileâ€butadieneâ€styrene) and polypropylene nanocomposites. Polymer Engineering and Science, 2007, 47, 1671-1677. | 3.1 | 36 |
| 26 | 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 |
| 27 | Ultrahigh strength, modulus, and conductivity of graphitic fibers by macromolecular coalescence. Science Advances, 2022, 8, eabn0939. | 10.3 | 34 |
| 28 | Pulmonary Responses of Sprague-Dawley Rats in Single Inhalation Exposure to Graphene Oxide Nanomaterials. BioMed Research International, 2015, 2015, 1-9. | 1.9 | 33 |
| 29 | 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 |
| 30 | Remote control of volume phase transition of hydrogels containing graphene oxide by visible light irradiation. RSC Advances, 2014, 4, 25379-25383. | 3.6 | 30 |
| 31 | 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 |
| 32 | Hierarchical structure control in solution spinning for strong and multifunctional carbon nanotube fibers. Carbon, 2022, 196, 59-69. | 10.3 | 28 |
| 33 | Theoretical and experimental investigation of the wet-spinning process for mechanically strong carbon nanotube fibers. Chemical Engineering Journal, 2021, 412, 128650. | 12.7 | 27 |
| 34 | Fabrication of high-quality or highly porous graphene sheets from exfoliated graphene oxide via reactions in alkaline solutions. Carbon, 2018, 138, 219-226. | 10.3 | 26 |
| 35 | Translational and Rotational Diffusions of Multiwalled Carbon Nanotubes with Static Bending. Journal of Physical Chemistry C, 2008, 112, 10653-10658. | 3.1 | 25 |
| 36 | A differential pressure extensional rheometer on a chip with fully developed elongational flow. Journal of Rheology, 2017, 61, 1049-1059. | 2.6 | 23 |

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|---|---|---|---|
| 37 | Rheology of a viscoelastic emulsion with a liquid crystalline polymer dispersed phase. Journal of Rheology, 1999, 43, 1583-1598. | 2.6 | 22 |
| 38 | 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. | 2.6 | 22 |
| 39 | Water and oxygen permeation through transparent ethylene vinyl alcohol/(graphene oxide) membranes. Carbon Letters, 2014, 15, 50-56. | 5.9 | 21 |
| 40 | Sustainable production of reduced graphene oxide using elemental sulfur for multifunctional composites. Composites Part B: Engineering, 2019, 176, 107236. | 12.0 | 20 |
| 41 | Percolation of two-dimensional multiwall carbon nanotube networks. Applied Physics Letters, 2009, 95, 134104. | 3.3 | 19 |
| 42 | Oscillatory shear induced gelation of grapheneâ€“poly(vinyl alcohol) composite hydrogels and rheological premonitor of ultra-light aerogels. Polymer, 2014, 55, 287-294. | 3.8 | 19 |
| 43 | Lateral diffusion of graphene oxides in water and the size effect on the orientation of dispersions and electrical conductivity. Carbon, 2017, 125, 280-288. | 10.3 | 19 |
| 44 | The effect of mesoscopic shape on thermal properties of multi-walled carbon nanotube mats. Current Applied Physics, 2011, 11, 1144-1148. | 2.4 | 18 |
| 45 | 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 |
| 46 | 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. | 3.6 | 18 |
| 47 | 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 |
| 48 | Methylpiperidine-functionalized graphene oxide for efficient curing acceleration and gas barrier of polymer nanocomposites. Applied Surface Science, 2019, 464, 509-515. | 6.1 | 17 |
| 49 | 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 |
| 50 | Thermal properties and morphology of blends of poly(ether imide) and polycarbonate. Polymer Engineering and Science, 1996, 36, 2694-2702. | 3.1 | 15 |
| 51 | Thermal properties of melt-blended poly(ether ether ketone) and poly(ether imide). Journal of Applied Polymer Science, 1999, 72, 733-739. | 2.6 | 15 |
| 52 | 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 |
| 53 | Negative normal stress differences in graphene/polycarbonate composites. Applied Physics Letters, 2012, 100, . | 3.3 | 14 |
| 54 | Brush-painted superhydrophobic silica coating layers for self-cleaning solar panels. Journal of Industrial and Engineering Chemistry, 2022, 106, 460-468. | 5.8 | 14 |

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|---|---|---|---|
| 55 | 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 |
| 56 | 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. | 3.1 | 13 |
| 57 | Generation and characterization of monodisperse deformable alginate and pNIPAM microparticles with a wide range of shear moduli. Soft Matter, 2017, 13, 5785-5794. | 2.7 | 13 |
| 58 | The deformation and retraction of thermotropic LCP droplets in a flexible polymer matrix. Journal of Non-Newtonian Fluid Mechanics, 2000, 93, 315-323. | 2.4 | 12 |
| 59 | Linear Viscoelasticity and the Measurement of Interfacial Tension in a Partially Miscible Polymer Mixture. Macromolecules, 2005, 38, 1196-1200. | 4.8 | 12 |
| 60 | 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. | 2.6 | 11 |
| 61 | Elastic particle deformation in rectangular channel flow as a measure of particle stiffness. Soft Matter, 2018, 14, 216-227. | 2.7 | 11 |
| 62 | Effects of Fiber Characteristics on the Rheological and Mechanical Properties of Polycarbonate/Carbon Fiber Composites. Composite Interfaces, 2009, 16, 477-491. | 2.3 | 10 |
| 63 | 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. | 2.6 | 10 |
| 64 | Rotational motions of repulsive graphene oxide domains in aqueous dispersion during slow shear flow. Journal of Rheology, 2020, 64, 29-41. | 2.6 | 9 |
| 65 | Polyvinylidene Fluoride/Reduced Graphene Oxide Layers on SiO<sub>x</sub>N<sub>y</sub>/Poly(ethylene terephthalate) Films as Transparent Coatings for Organic Electronic Devices and Packaging Materials. ACS Applied Nano Materials, 2020, 3, 8972-8981. | 5.0 | 9 |
| 66 | 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 |
| 67 | 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 |
| 68 | Size of a crystal nucleus in the isothermal crystallization of supercooled liquid. Journal of Chemical Physics, 2013, 139, 104909. | 3.0 | 8 |
| 69 | 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 |
| 70 | 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. | 4.8 | 7 |
| 71 | Highâ€Resolution 3D Printing of Mechanically Tough Hydrogels Prepared by Thermoâ€Responsive Poloxamer Ink Platform. Macromolecular Rapid Communications, 2022, 43, e2100579. | 3.9 | 7 |
| 72 | 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. | 3.1 | 6 |

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|---|---|---|---|
| 73 | Humanâ€Irisâ€Like Aperture and Sphincter Muscle Comprising Hyperelastic Composite Hydrogels Containing Graphene Oxide. Macromolecular Materials and Engineering, 2019, 304, 1800560. | 3.6 | 5 |
| 74 | Dispersion of Multiwalled Carbon Nanotubes in Aqueous Silk Fibroin Solutions. Journal of Nanoscience and Nanotechnology, 2008, 8, 5543-5546. | 0.9 | 4 |
| 75 | 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 |
| 76 | Mass Production of 2D Manifolds of Graphene Oxide by Shear Flow. Advanced Functional Materials, 0, , 2107694. | 14.9 | 2 |
| 77 | Tube-rolling and formation of mechanically robust micro-tubes in graphene oxide aqueous dispersions during shear flow. Soft Matter, 2019, 15, 4238-4243. | 2.7 | 1 |
| 78 | Thermal properties of meltâ€blended poly(ether ether ketone) and poly(ether imide). Journal of Applied Polymer Science, 1999, 72, 733-739. | 2.6 | 1 |
| 79 | Investigation of Mechanical and Thermal Properties of Poly(N-isopropylacrylamide) Hydrogels Containing Graphene Oxide. Porrime, 2015, 39, 788. | 0.2 | 1 |
| 80 | Synthesis of Poly(N-isopropylacrylamide) Micro-hydrogel Using a Microfluidic Channel and Study on Concentration Sensor. Porrime, 2018, 42, 1052-1058. | 0.2 | 1 |
| 81 | Simulated orientational morphology from the measured transient rheology of polycarbonateâ€“carbon fiber composites. Korea Australia Rheology Journal, 0, , . | 1.7 | 0 |