Kunpeng Cui

List of Publications by Citations

48 papers	1,505 citations	25 h-index	38 g-index
50 ext. papers	1,817 ext. citations	7.6 avg, IF	4.77 L-index

#	Paper	IF	Citations
48	Multiscale and Multistep Ordering of Flow-Induced Nucleation of Polymers. *Chemical Reviews*, **2018** , 118, 1840-1886	68.1	153
47	Stretch-Induced Crystal–Crystal Transition of Polybutene-1: An in Situ Synchrotron Radiation Wide-Angle X-ray Scattering Study. *Macromolecules*, **2012**, 45, 2764-2772	5.5	109
46	Bulk Energy Dissipation Mechanism for the Fracture of Tough and Self-Healing Hydrogels. *Macromolecules*, **2017**, 50, 2923-2931	5.5	76
45	Self-Acceleration of Nucleation and Formation of Shish in Extension-Induced Crystallization with Strain Beyond Fracture. *Macromolecules*, **2012**, 45, 5477-5486	5.5	66
44	Correlation between Flow-Induced Nucleation Morphologies and Strain in Polyethylene: From Uncorrelated Oriented Point-Nuclei, Scaffold-Network, and Microshish to Shish. *Macromolecules*, **2013**, 46, 3435-3443	5.5	65
43	Multiscale Energy Dissipation Mechanism in Tough and Self-Healing Hydrogels. *Physical Review Letters*, **2018**, 121, 185501	7.4	63
42	Extension-Induced Nucleation under Near-Equilibrium Conditions: The Mechanism on the Transition from Point Nucleus to Shish. *Macromolecules*, **2014**, 47, 6813-6823	5.5	61
41	Extension Flow Induced Crystallization of Poly(ethylene oxide). *Macromolecules*, **2011**, 44, 7704-7712	5.5	50
40	Nonequilibrium Nature of Flow-Induced Nucleation in Isotactic Polypropylene. *Macromolecules*, **2015**, 48, 694-699	5.5	49
39	Mesoscale bicontinuous networks in self-healing hydrogels delay fatigue fracture. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 7606-7612	11.5	48
38	Kinetic Process of Shish Formation: From Stretched Network to Stabilized Nuclei. *Macromolecules*, **2015**, 48, 5276-5285	5.5	46
37	The non-equilibrium phase diagrams of flow-induced crystallization and melting of polyethylene. *Scientific Reports*, **2016**, 6, 32968	4.9	45
36	Extensional rheometer for in situ x-ray scattering study on flow-induced crystallization of polymer. *Review of Scientific Instruments*, **2011**, 82, 045104	1.7	41
35	Mixing Assisted Direct Formation of Isotactic Poly(1-butene) Form I? Crystals from Blend Melt of Isotactic Poly(1-butene)/Polypropylene. *Macromolecules*, **2016**, 49, 1761-1769	5.5	39
34	Facile synthesis of novel elastomers with tunable dynamics for toughness, self-healing and adhesion. *Journal of Materials Chemistry A*, **2019**, 7, 17334-17344	13	37
33	Flow-Induced Precursors of Isotactic Polypropylene: An in Situ Time and Space Resolved Study with Synchrotron Radiation Scanning X-ray Microdiffraction. *Macromolecules*, **2014**, 47, 4408-4416	5.5	37
32	Hydrogels as dynamic memory with forgetting ability. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 18962-18968	11.5	37

(2013-2014)

31	Multimorphological Crystallization of Shish-Kebab Structures in Isotactic Polypropylene: Quantitative Modeling of ParentDaughter Crystallization Kinetics. *Macromolecules*, **2014**, 47, 5152-5162	5.5	36
30	Extension-Induced Crystallization of Poly(ethylene oxide) Bidisperse Blends: An Entanglement Network Perspective. *Macromolecules*, **2014**, 47, 677-686	5.5	35
29	Stretching-induced ion complexation in physical polyampholyte hydrogels. *Soft Matter*, **2016**, 12, 8833-8840	3.6	34
28	Supertough Lignin Hydrogels with Multienergy Dissipative Structures and Ultrahigh Antioxidative Activities. *ACS Applied Materials & Interfaces*, **2020**, 12, 39892-39901	9.5	32
27	Tough and Self-Recoverable Thin Hydrogel Membranes for Biological Applications. *Advanced Functional Materials*, **2018**, 28, 1801489	15.6	31
26	Investigation on the recovery performance of olefin block copolymer/hexadecane form stable phase change materials with shape memory properties. *Solar Energy Materials and Solar Cells*, **2015**, 132, 632-639	6.4	30
25	Effect of Structure Heterogeneity on Mechanical Performance of Physical Polyampholytes Hydrogels. *Macromolecules*, **2019**, 52, 7369-7378	5.5	28
24	Phase Separation Behavior in Tough and Self-Healing Polyampholyte Hydrogels. *Macromolecules*, **2020**, 53, 5116-5126	5.5	25
23	A simple constrained uniaxial tensile apparatus for in situ investigation of film stretching processing. *Review of Scientific Instruments*, **2013**, 84, 115104	1.7	25
22	A novel apparatus combining polymer extrusion processing and x-ray scattering. *Polymer Testing*, **2014**, 33, 40-47	4.5	17
21	Effect of mesoscale phase contrast on fatigue-delaying behavior of self-healing hydrogels. *Science Advances*, **2021**, 7,	14.3	16
20	Molecular mechanism leading to memory effect of mesomorphic isotactic polypropylene. *Journal of Polymer Science, Part B: Polymer Physics*, **2016**, 54, 1573-1580	2.6	16
19	The thermodynamic properties of flow-induced precursor of polyethylene. *Science China Chemistry*, **2015**, 58, 1570-1578	7.9	15
18	Constrained and free uniaxial stretching induced crystallization of polyethylene film: A comparative study. *Polymer Testing*, **2014**, 36, 110-118	4.5	15
17	Stress Relaxation and Underlying Structure Evolution in Tough and Self-Healing Hydrogels. *ACS Macro Letters*, **2020**, 9, 1582-1589	6.6	15
16	Aggregated structures and their functionalities in hydrogels. *Aggregate*, **2021**, 2, e33	22.9	15
15	Relaxation Dynamics and Underlying Mechanism of a Thermally Reversible Gel from Symmetric Triblock Copolymer. *Macromolecules*, **2019**, 52, 8651-8661	5.5	11
14	Disentanglement decelerating flow-induced nucleation. *Polymer*, **2013**, 54, 942-947	3.9	10

13	Molecular mechanism of abnormally large nonsoftening deformation in a tough hydrogel. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	10
12	Confined crystallization in end-linked PEO network under uniaxial extension. *Polymer*, **2013**, 54, 7088-7093	3.9	8
11	Relaxation propelled long period change in the extension induced crystallization of polyethylene oxide. *Soft Matter*, **2013**, 9, 10759	3.6	8
10	Tough, self-recovery and self-healing polyampholyte hydrogels. *Polymer Science - Series C*, **2017**, 59, 11-17	1.1	8
9	A small-angle x-ray scattering system with a vertical layout. *Review of Scientific Instruments*, **2014**, 85, 125110	1.7	8
8	Tough Hydrogels with Dynamic H-Bonds: Structural Heterogeneities and Mechanical Performances. *Macromolecules*,	5.5	7
7	Constitutive modeling of bond breaking and healing kinetics of physical Polyampholyte (PA) gel. *Extreme Mechanics Letters*, **2021**, 43, 101184	3.9	5
6	Lamellar Bilayer to Fibril Structure Transformation of Tough Photonic Hydrogel under Elongation. *Macromolecules*, **2020**, 53, 4711-4721	5.5	4
5	High-Fidelity Hydrogel Thin Films Processed from Deep Eutectic Solvents. *ACS Applied Materials & Interfaces*, **2020**, 12, 43191-43200	9.5	4
4	A new three-dimensional (3D) multilayer organic material: synthesis, swelling, exfoliation, and application. *Langmuir*, **2013**, 29, 3813-20	4	3
3	Tough and Self-Healing Hydrogels from Polyampholytes. *Advances in Polymer Science*, **2020**, 295-317	1.3	2
2	Constitutive modeling of strain-dependent bond breaking and healing kinetics of chemical polyampholyte (PA) gel. *Soft Matter*, **2021**, 17, 4161-4169	3.6	2
1	Tough Hydrogels Based on Sacrificial Bond Principle1-28		