Daniel R King

List of Publications by Year
in descending order

40 papers	1,908 citations	361045 20 h-index	329751 37 g-index
41 all docs	41 docs citations	41 times ranked	2242 citing authors

#	Article	IF	Citations
1	Looking Beyond Fibrillar Features to Scale Geckoâ€Like Adhesion. Advanced Materials, 2012, 24, 1078-1083.	11.1	243
2	Tough Hydrogels with Fast, Strong, and Reversible Underwater Adhesion Based on a Multiscale Design. Advanced Materials, 2018, 30, e1801884.	11.1	235
3	Energyâ€Dissipative Matrices Enable Synergistic Toughening in Fiber Reinforced Soft Composites. Advanced Functional Materials, 2017, 27, 1605350.	7.8	116
4	Creating Geckoâ€Like Adhesives for â€œReal Worldâ€•Surfaces. Advanced Materials, 2014, 26, 4345-4351.	11.1	112
5	Extremely tough composites from fabric reinforced polyampholyte hydrogels. Materials Horizons, 2015, 2, 584-591.	6.4	108
6	Bulk Energy Dissipation Mechanism for the Fracture of Tough and Self-Healing Hydrogels. Macromolecules, 2017, 50, 2923-2931.	2.2	102
7	Strong and Tough Polyion-Complex Hydrogels from Oppositely Charged Polyelectrolytes: A Comparative Study with Polyampholyte Hydrogels. Macromolecules, 2016, 49, 2750-2760.	2.2	91
8	Creating Stiff, Tough, and Functional Hydrogel Composites with Lowâ€Meltingâ€Point Alloys. Advanced Materials, 2018, 30, e1706885.	11.1	81
9	Tough Particleâ€Based Double Network Hydrogels for Functional Solid Surface Coatings. Advanced Materials Interfaces, 2018, 5, 1801018.	1.9	78
10	Fiberâ€Reinforced Viscoelastomers Show Extraordinary Crack Resistance That Exceeds Metals. Advanced Materials, 2020, 32, e1907180.	11.1	77
11	Hydrogel/Elastomer Laminates Bonded via Fabric Interphases for Stimuli-Responsive Actuators. Matter, 2019, 1, 674-689.	5.0	74
12	Facile synthesis of novel elastomers with tunable dynamics for toughness, self-healing and adhesion. Journal of Materials Chemistry A, 2019, 7, 17334-17344.	5.2	70
13	Molecular Mobility and Cation Conduction in Polyetherâ€“Esterâ€“Sulfonate Copolymer Ionomers. Macromolecules, 2012, 45, 3962-3973.	2.2	67
14	Macroscale Double Networks: Design Criteria for Optimizing Strength and Toughness. ACS Applied Materials & Interfaces, 2019, 11, 35343-35353.	4.0	49
15	Ionic aggregate dissolution and conduction in a plasticized single-ion polymer conductor. Polymer, 2015, 59, 133-143.	1.8	44
16	Superior fracture resistance of fiber reinforced polyampholyte hydrogels achieved by extraordinarily large energy-dissipative process zones. Journal of Materials Chemistry A, 2019, 7, 13431-13440.	5.2	40
17	Double network hydrogels based on semi-rigid polyelectrolyte physical networks. Journal of Materials Chemistry B, 2019, 7, 6347-6354.	2.9	34
18	Geckos as Springs: Mechanics Explain Across-Species Scaling of Adhesion. PLoS ONE, 2015, 10, e0134604.	1.1	30

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19	Polyelectrolyte complexation via viscoelastic phase separation results in tough and self-recovering porous hydrogels. Journal of Materials Chemistry B, 2019, 7, 5296-5305.	2.9	27
20	Polyzwitterions as a Versatile Building Block of Tough Hydrogels: From Polyelectrolyte Complex Gels to Double-Network Gels. ACS Applied Materials & Interfaces, 2020, 12, 50068-50076.	4.0	26
21	Optimizing Adhesive Design by Understanding Compliance. ACS Applied Materials & Interfaces, 2015, 7, 27771-27781.	4.0	24
22	Coupled instabilities of surface crease and bulk bending during fast free swelling of hydrogels. Soft Matter, 2016, 12, 5081-5088.	1.2	20
23	Anisotropic Double-Network Hydrogels via Controlled Orientation of a Physical Sacrificial Network. ACS Applied Polymer Materials, 2020, 2, 2350-2358.	2.0	19
24	Modulation and Characterization of the Double Network Hydrogel Surface-Bulk Transition. Macromolecules, 2019, 52, 6704-6713.	2.2	18
25	Electronic structure of strongly correlated systems: recent developments in multiconfiguration pair-density functional theory and multiconfiguration nonclassical-energy functional theory. Chemical Science, 2022, 13, 7685-7706.	3.7	18
26	High strength hydrogels enable dendrite-free Zn metal anodes and high-capacity Znâ€“MnO₂ batteries via a modified mechanical suppression effect. Journal of Materials Chemistry A, 2022, 10, 3122-3133.	5.2	17
27	Dynamic bonds enable high toughness and multifunctionality in gelatin/tannic acid-based hydrogels with tunable mechanical properties. Soft Matter, 2021, 17, 9399-9409.	1.2	15
28	Environmental chamber for in situ dynamic control of temperature and relative humidity during x-ray scattering. Review of Scientific Instruments, 2012, 83, 025112.	0.6	14
29	Mechanical behavior of unidirectional fiber reinforced soft composites. Extreme Mechanics Letters, 2020, 35, 100642.	2.0	13
30	Improving the strength and toughness of macroscale double networks by exploiting Poissonâ€™s ratio mismatch. Scientific Reports, 2021, 11, 13280.	1.6	11
31	Tiny yet tough: Maximizing the toughness of fiber-reinforced soft composites in the absence of a fiber-fracture mechanism. Matter, 2021, 4, 3646-3661.	5.0	11
32	High-Fidelity Hydrogel Thin Films Processed from Deep Eutectic Solvents. ACS Applied Materials & Interfaces, 2020, 12, 43191-43200.	4.0	8
33	Biomimetics: Looking Beyond Fibrillar Features to Scale Gecko-Like Adhesion (Adv. Mater. 8/2012). Advanced Materials, 2012, 24, 994-994.	11.1	4
34	High strength reversible adhesive closures. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1783-1790.	2.4	4
35	Macroscale double networks: highly dissipative soft composites. Polymer Journal, 2022, 54, 943-955.	1.3	4
36	Double Network Gels: Tough Particleâ€Based Double Network Hydrogels for Functional Solid Surface Coatings (Adv. Mater. Interfaces 23/2018). Advanced Materials Interfaces, 2018, 5, 1870118.	1.9	2

#	Article	IF	Citations
37	Hierarchical toughening: A step toward matching the complexity of biological materials. CheM, 2021, 7, 1153-1155.	5.8	2
38	Far from Home: Life as a Soft Matter Researcher Abroad. Matter, 2019, 1, 621-625.	5.0	0
39	Adhesive binders for nanosilicon anodes in lithium-ion batteries. , 2021, , 279-299.		0
40	(Invited) Creating â€œDouble Networkâ€•Composites Via Macroscale Reinforcement. ECS Meeting Abstracts, 2018, , .	0.0	0