Daniel R King

List of Publications by Citations

37 papers	1,306 citations	18 h-index	36 g-index
41 ext. papers	1,594 ext. citations	10.2 avg, IF	4.62 L-index

#	Paper	IF	Citations
37	Looking beyond fibrillar features to scale gecko-like adhesion. *Advanced Materials*, **2012**, 24, 1078-83	24	196
36	Tough Hydrogels with Fast, Strong, and Reversible Underwater Adhesion Based on a Multiscale Design. *Advanced Materials*, **2018**, 30, e1801884	24	154
35	Creating gecko-like adhesives for "real world" surfaces. *Advanced Materials*, **2014**, 26, 4345-51	24	93
34	Extremely tough composites from fabric reinforced polyampholyte hydrogels. *Materials Horizons*, **2015**, 2, 584-591	14.4	85
33	Energy-Dissipative Matrices Enable Synergistic Toughening in Fiber Reinforced Soft Composites. *Advanced Functional Materials*, **2017**, 27, 1605350	15.6	84
32	Bulk Energy Dissipation Mechanism for the Fracture of Tough and Self-Healing Hydrogels. *Macromolecules*, **2017**, 50, 2923-2931	5.5	76
31	Strong and Tough Polyion-Complex Hydrogels from Oppositely Charged Polyelectrolytes: A Comparative Study with Polyampholyte Hydrogels. *Macromolecules*, **2016**, 49, 2750-2760	5.5	73
30	Creating Stiff, Tough, and Functional Hydrogel Composites with Low-Melting-Point Alloys. *Advanced Materials*, **2018**, 30, e1706885	24	63
29	Molecular Mobility and Cation Conduction in Polyether-Ester-Sulfonate Copolymer Ionomers. *Macromolecules*, **2012**, 45, 3962-3973	5.5	57
28	Tough Particle-Based Double Network Hydrogels for Functional Solid Surface Coatings. *Advanced Materials Interfaces*, **2018**, 5, 1801018	4.6	46
27	Hydrogel/Elastomer Laminates Bonded via Fabric Interphases for Stimuli-Responsive Actuators. *Matter*, **2019**, 1, 674-689	12.7	45
26	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
25	Fiber-Reinforced Viscoelastomers Show Extraordinary Crack Resistance That Exceeds Metals. *Advanced Materials*, **2020**, 32, e1907180	24	35
24	Ionic aggregate dissolution and conduction in a plasticized single-ion polymer conductor. *Polymer*, **2015**, 59, 133-143	3.9	35
23	Macroscale Double Networks: Design Criteria for Optimizing Strength and Toughness. *ACS Applied Materials & Interfaces*, **2019**, 11, 35343-35353	9.5	33
22	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	13	26
21	Geckos as Springs: Mechanics Explain Across-Species Scaling of Adhesion. *PLoS ONE*, **2015**, 10, e0134604	3.7	21

20	Double network hydrogels based on semi-rigid polyelectrolyte physical networks. *Journal of Materials Chemistry B*, **2019**, 7, 6347-6354	7.3	18
19	Polyelectrolyte complexation via viscoelastic phase separation results in tough and self-recovering porous hydrogels. *Journal of Materials Chemistry B*, **2019**, 7, 5296-5305	7.3	17
18	Optimizing Adhesive Design by Understanding Compliance. *ACS Applied Materials & Interfaces*, **2015**, 7, 27771-81	9.5	16
17	Coupled instabilities of surface crease and bulk bending during fast free swelling of hydrogels. *Soft Matter*, **2016**, 12, 5081-8	3.6	16
16	Modulation and Characterization of the Double Network Hydrogel Surface-Bulk Transition. *Macromolecules*, **2019**, 52, 6704-6713	5.5	11
15	Anisotropic Double-Network Hydrogels via Controlled Orientation of a Physical Sacrificial Network. *ACS Applied Polymer Materials*, **2020**, 2, 2350-2358	4.3	11
14	Environmental chamber for in situ dynamic control of temperature and relative humidity during x-ray scattering. *Review of Scientific Instruments*, **2012**, 83, 025112	1.7	11
13	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	9.5	11
12	Mechanical behavior of unidirectional fiber reinforced soft composites. *Extreme Mechanics Letters*, **2020**, 35, 100642	3.9	7
11	High strength reversible adhesive closures. *Journal of Polymer Science, Part B: Polymer Physics*, **2017**, 55, 1783-1790	2.6	4
10	High-Fidelity Hydrogel Thin Films Processed from Deep Eutectic Solvents. *ACS Applied Materials & Interfaces*, **2020**, 12, 43191-43200	9.5	4
9	Improving the strength and toughness of macroscale double networks by exploiting Poisson's ratio mismatch. *Scientific Reports*, **2021**, 11, 13280	4.9	4
8	Dynamic bonds enable high toughness and multifunctionality in gelatin/tannic acid-based hydrogels with tunable mechanical properties. *Soft Matter*, **2021**, 17, 9399-9409	3.6	4
7	Biomimetics: Looking Beyond Fibrillar Features to Scale Gecko-Like Adhesion (Adv. Mater. 8/2012). *Advanced Materials*, **2012**, 24, 994-994	24	3
6	High strength hydrogels enable dendrite-free Zn metal anodes and high-capacity Zn-MnO2 batteries via a modified mechanical suppression effect. *Journal of Materials Chemistry A*, **2022**, 10, 3122-3133	12	2
5	Double Network Gels: Tough Particle-Based Double Network Hydrogels for Functional Solid Surface Coatings (Adv. Mater. Interfaces 23/2018). *Advanced Materials Interfaces*, **2018**, 5, 1870118	4.6	2
4	Tiny yet tough: Maximizing the toughness of fiber-reinforced soft composites in the absence of a fiber-fracture mechanism. *Matter*, **2021**,	12.7	2
3	Hierarchical toughening: A step toward matching the complexity of biological materials. *CheM*, **2021**, 7, 1153-1155	16.2	1

2	Macroscale double networks: highly dissipative soft composites. *Polymer Journal*,	2.7	0
1	Adhesive binders for nanosilicon anodes in lithium-ion batteries **2021**, 279-299		