Niels Holten-Andersen

List of Publications by Year
in descending order

43	5,874	236925 25	265206 42
papers	citations	h-index	g-index

44	44	44	6599
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	pH-induced metal-ligand cross-links inspired by mussel yield self-healing polymer networks with near-covalent elastic moduli. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 2651-2655.	7.1	1,314
2	Iron-Clad Fibers: A Metal-Based Biological Strategy for Hard Flexible Coatings. Science, 2010, 328, 216-220.	12.6	838
3	Adhesion mechanisms of the mussel foot proteins mfp-1 and mfp-3. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 3782-3786.	7.1	471
4	White-Light-Emitting Lanthanide Metallogels with Tunable Luminescence and Reversible Stimuli-Responsive Properties. Journal of the American Chemical Society, 2015, 137, 11590-11593.	13.7	379
5	Control of hierarchical polymer mechanics with bioinspired metal-coordination dynamics. Nature Materials, 2015, 14, 1210-1216.	27.5	375
6	Controlling Hydrogel Mechanics via Bio-Inspired Polymerâ€“Nanoparticle Bond Dynamics. ACS Nano, 2016, 10, 1317-1324.	14.6	253
7	Components for high speed atomic force microscopy. Ultramicroscopy, 2006, 106, 881-887.	1.9	220
8	pHâ€Based Regulation of Hydrogel Mechanical Properties Through Musselâ€Inspired Chemistry and Processing. Advanced Functional Materials, 2013, 23, 1111-1119.	14.9	214
9	Protective coatings on extensible biofibres. Nature Materials, 2007, 6, 669-672.	27.5	206
10	Metals and the Integrity of a Biological Coating: The Cuticle of Mussel Byssus. Langmuir, 2009, 25, 3323-3326.	3.5	190
11	Metal-coordination: using one of nature's tricks to control soft material mechanics. Journal of Materials Chemistry B, 2014, 2, 2467-2472.	5.8	178
12	Transition-metal coordinate bonds for bioinspired macromolecules with tunable mechanical properties. Nature Reviews Materials, 2021, 6, 421-436.	48.7	148
13	White Light-Emitting Multistimuli-Responsive Hydrogels with Lanthanides and Carbon Dots. ACS Applied Materials & Interfaces, 2018, 10, 10409-10418.	8.0	133
14	Tuning Dynamic Mechanical Response in Metallopolymer Networks through Simultaneous Control of Structural and Temporal Properties of the Networks. Macromolecules, 2016, 49, 6310-6321.	4.8	124
15	A Doubleâ€Layer Mechanochromic Hydrogel with Multidirectional Force Sensing and Encryption Capability. Advanced Functional Materials, 2019, 29, 1808191.	14.9	109
16	Engineering Elasticity and Relaxation Time in Metal-Coordinate Cross-Linked Hydrogels. Macromolecules, 2016, 49, 8306-8312.	4.8	92
17	Stiff Coatings on Compliant Biofibers: The Cuticle of Mytilus californianus Byssal Threads[,]. Biochemistry, 2009, 48, 2752-2759.	2.5	84
18	Dual Role for 1,2,4,5-Tetrazines in Polymer Networks: Combining Dielsâ€“Alder Reactions and Metal Coordination To Generate Functional Supramolecular Gels. ACS Macro Letters, 2015, 4, 458-461.	4.8	65

#	Article	IF	Citations
19	In situ mechanical reinforcement of polymer hydrogels via metal-coordinated crosslink mineralization. Nature Communications, 2021, 12, 667.	12.8	60
20	Mucins trigger dispersal of Pseudomonas aeruginosa biofilms. Npj Biofilms and Microbiomes, 2018, 4, 23.	6.4	52
21	Bio-inspired metal-coordinate hydrogels with programmable viscoelastic material functions controlled by longwave UV light. Soft Matter, 2017, 13, 4057-4065.	2.7	47
22	Enhanced Water Retention Maintains Energy Dissipation in Dehydrated Metal-Coordinate Polymer Networks: Another Role for Fe-Catechol Cross-Links?. Chemistry of Materials, 2018, 30, 3648-3655.	6.7	34
23	Ragworm Jaw-Inspired Metal Ion Cross-Linking for Improved Mechanical Properties of Polymer Blends. Biomacromolecules, 2008, 9, 2873-2880.	5.4	32
24	Multistimuliâ€responsive White Luminescent Fluids Using Hybrid Lanthanide Metalâ€“Coordinate Complex Probes. Advanced Optical Materials, 2015, 3, 1041-1046.	7.3	31
25	Geometric tools for complex interfaces: from lung surfactant to the mussel byssus. Soft Matter, 2009, 5, 1963.	2.7	25
26	Heteroaggregation Approach for Depositing Magnetite Nanoparticles onto Silica-Overcoated Gold Nanorods. Chemistry of Materials, 2017, 29, 10362-10368.	6.7	22
27	Programmable Anisotropy and Percolation in Supramolecular Patchy Particle Gels. ACS Nano, 2020, 14, 17018-17027.	14.6	21
28	KL4 Peptide Induces Reversible Collapse Structures on Multiple Length Scales in Model Lung Surfactant. Biophysical Journal, 2011, 101, 2957-2965.	0.5	20
29	Expanding the stoichiometric window for metal cross-linked gel assembly using competition. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21369-21374.	7.1	19
30	Bioinspired Gradient Materials via Blending of Polymer Electrolytes and Applying Electric Forces. Journal of Physical Chemistry B, 2009, 113, 647-655.	2.6	17
31	Demonstration of Environmentally Stable, Broadband Energy Dissipation via Multiple Metal Crossâ€Linked Glycerol Gels. Advanced Functional Materials, 2021, 31, 2009118.	14.9	15
32	Effect of sticker clustering on the dynamics of associative networks. Soft Matter, 2021, 17, 8960-8972.	2.7	12
33	Charge Influences Substrate Recognition and Self-Assembly of Hydrophobic FG Sequences. Biophysical Journal, 2017, 113, 2088-2099.	0.5	11
34	Anomalous Diffusion in Associative Networks of High-Sticker-Density Polymers. Macromolecules, 2021, 54, 1354-1365.	4.8	11
35	Brush Polymers as Nanoscale Building Blocks for Hydrogel Synthesis. Chemistry of Materials, 2021, 33, 5748-5756.	6.7	11
36	Understanding the molecular origin of shear thinning in associative polymers through quantification of bond dissociation under shear. Physical Review Materials, 2020, 4, .	2.4	10

#	Article	IF	Citations
37	Rheology as a Mechanoscopic Method to Monitor Mineralization in Hydrogels. Biomacromolecules, 2017, 18, 4067-4074.	5.4	9
38	Deciphering How the Viscoelastic Properties of Mussel-Inspired Metal-Coordinate Transiently Cross-Linked Gels Dictate Their Tack Behavior. Langmuir, 2019, 35, 15979-15984.	3.5	9
39	Interfacial Adhesion of Fully Transient, Musselâ€Inspired Hydrogels with Different Network Crosslink Modalities. Advanced Materials Interfaces, 2021, 8, 2100319.	3.7	7
40	Characterizing viscoelastic properties of synthetic and natural fibers and their coatings with a torsional pendulum. Soft Matter, 2021, 17, 4578-4593.	2.7	2
41	Time-resolved rheometry of drying liquids and suspensions. Journal of Rheology, 2021, 65, 427-436.	2.6	2
42	Self-Diffusion in a Weakly Entangled Associative Network. Macromolecules, 2022, 55, 6056-6066.	4.8	2
43	Interfacial Adhesion of Musselâ€Inspired Hydrogels: Interfacial Adhesion of Fully Transient, Musselâ€Inspired Hydrogels with Different Network Crosslink Modalities (Adv. Mater. Interfaces) Tj ETQq1 1 0.784314 rgBT /Overlock	3.7	