

Alshakim Nelson

List of Publications by Year in descending order

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78
papers

4,980
citations

71102

41
h-index

91884

69
g-index

81
all docs

81
docs citations

81
times ranked

6636
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct-Ink Write 3D Printing Multistimuli-Responsive Hydrogels and Post-Functionalization Via Disulfide Exchange. <i>ACS Applied Polymer Materials</i> , 2022, 4, 3054-3061.	4.4	8
2	Methacrylated Bovine Serum Albumin and Tannic Acid Composite Materials for Three-Dimensional Printing Tough and Mechanically Functional Parts. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 21418-21425.	8.0	9
3	3D bioprinting of mechanically tuned bioinks derived from cardiac decellularized extracellular matrix. <i>Acta Biomaterialia</i> , 2021, 119, 75-88.	8.3	110
4	The role of polymer mechanochemistry in responsive materials and additive manufacturing. <i>Nature Reviews Materials</i> , 2021, 6, 84-98.	48.7	151
5	4D Printing of Multi-Stimuli Responsive Protein-Based Hydrogels for Autonomous Shape Transformations. <i>Advanced Functional Materials</i> , 2021, 31, 2011012.	14.9	65
6	Mechanoactivation of Color and Autonomous Shape Change in 3D-Printed Ionic Polymer Networks. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 19263-19270.	8.0	15
7	3D-Printed Bioplastics with Shape-Memory Behavior Based on Native Bovine Serum Albumin. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 19193-19199.	8.0	26
8	Photocross-Linked Antimicrobial Amino-Siloxane Elastomers. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 22195-22203.	8.0	8
9	Bioproduced Proteins On Demand (Bio-POD) in hydrogels using <i>Pichia pastoris</i> . <i>Bioactive Materials</i> , 2021, 6, 2390-2399.	15.6	13
10	Metabolism Control in 3D-Printed Living Materials Improves Fermentation. <i>ACS Applied Bio Materials</i> , 2021, 4, 7195-7203.	4.6	11
11	Additive Manufacturing of Bovine Serum Albumin-Based Hydrogels and Bioplastics. <i>Biomacromolecules</i> , 2020, 21, 484-492.	5.4	56
12	Sustainable Materials and Chemical Processes for Additive Manufacturing. <i>Chemistry of Materials</i> , 2020, 32, 7105-7119.	6.7	101
13	Time-dependent covalent network formation in extrudable hydrogels. <i>Polymer Chemistry</i> , 2020, 11, 6910-6918.	3.9	5
14	Mechano-Activated Objects with Multidirectional Shape Morphing Programmed via 3D Printing. <i>ACS Applied Polymer Materials</i> , 2020, 2, 2504-2508.	4.4	20
15	Physical Confinement Impacts Cellular Phenotypes within Living Materials. <i>ACS Applied Bio Materials</i> , 2020, 3, 4273-4281.	4.6	30
16	Cell-Laden Hydrogels for Multikingdom 3D Printing. <i>Macromolecular Bioscience</i> , 2020, 20, e2000121.	4.1	29
17	100th Anniversary of Macromolecular Science Viewpoint: Macromolecular Materials for Additive Manufacturing. <i>ACS Macro Letters</i> , 2020, 9, 627-638.	4.8	69
18	Compartmentalized microbes and co-cultures in hydrogels for on-demand bioproduction and preservation. <i>Nature Communications</i> , 2020, 11, 563.	12.8	134

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19	3D Printing Ionogel Auxetic Frameworks for Stretchable Sensors. <i>Advanced Materials Technologies</i> , 2019, 4, 1900452.	5.8	78
20	Sticky ends in a self-assembling ABA triblock copolymer: the role of ureas in stimuli-responsive hydrogels. <i>Molecular Systems Design and Engineering</i> , 2019, 4, 91-102.	3.4	7
21	3D printed coaxial nozzles for the extrusion of hydrogel tubes toward modeling vascular endothelium. <i>Biofabrication</i> , 2019, 11, 045009.	7.1	63
22	Stimuli-responsive materials in additive manufacturing. <i>Progress in Polymer Science</i> , 2019, 93, 36-67.	24.7	148
23	Poly(alkyl glycidyl ether) hydrogels for harnessing the bioactivity of engineered microbes. <i>Faraday Discussions</i> , 2019, 219, 58-72.	3.2	8
24	Multidimensional micro- and nano-printing technologies: general discussion. <i>Faraday Discussions</i> , 2019, 219, 73-76.	3.2	0
25	Chemical advances in additive manufacturing. <i>Polymer Chemistry</i> , 2019, 10, 5948-5949.	3.9	1
26	Preparation of multivalent glycan micro- and nano-arrays: general discussion. <i>Faraday Discussions</i> , 2019, 219, 128-137.	3.2	1
27	Mechanochromic composite elastomers for additive manufacturing and low strain mechanophore activation. <i>Polymer Chemistry</i> , 2019, 10, 5985-5991.	3.9	22
28	Tunable temperature- and shear-responsive hydrogels based on poly(alkyl glycidyl ether)s. <i>Polymer International</i> , 2019, 68, 1238-1246.	3.1	19
29	Additive manufacturing of catalytically active living material hydrogels. , 2019, , .		1
30	Chemical modification and printability of shear-thinning hydrogel inks for direct-write 3D printing. <i>Polymer</i> , 2018, 152, 42-50.	3.8	116
31	Additive Manufacturing of Catalytically Active Living Materials. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 13373-13380.	8.0	89
32	Cross-linkable multi-stimuli responsive hydrogel inks for direct-write 3D printing. <i>Polymer Chemistry</i> , 2017, 8, 4199-4206.	3.9	53
33	Catalytically Initiated Gel-in-Gel Printing of Composite Hydrogels. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 40898-40904.	8.0	44
34	Small changes with big effects: Tuning polymer properties with supramolecular interactions. <i>Journal of Polymer Science Part A</i> , 2016, 54, 457-472.	2.3	32
35	Simple and cost-effective polycondensation routes to antimicrobial consumer products. <i>Polymer Chemistry</i> , 2016, 7, 3923-3932.	3.9	11
36	Development of polycarbonate-containing block copolymers for thin film self-assembly applications. <i>Polymer Chemistry</i> , 2016, 7, 940-950.	3.9	24

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37	Hydrophilic Polycarbonates: Promising Degradable Alternatives to Poly(ethylene glycol)-Based Stealth Materials. <i>Macromolecules</i> , 2015, 48, 1673-1678.	4.8	64
38	Developments in Dynamic Covalent Chemistries from the Reaction of Thiols with Hexahydrotriazines. <i>Journal of the American Chemical Society</i> , 2015, 137, 14248-14251.	13.7	28
39	Dual-Responsive Hydrogels for Direct-Write 3D Printing. <i>Macromolecules</i> , 2015, 48, 6482-6488.	4.8	147
40	Monolayer Assembly of Ferrimagnetic Co ₂ Fe ₃ O ₄ Nanocubes for Magnetic Recording. <i>Nano Letters</i> , 2014, 14, 3395-3399.	9.1	117
41	Programmable Nanoparticle Ensembles via High-Throughput Directed Self-Assembly. <i>Langmuir</i> , 2013, 29, 3567-3574.	3.5	6
42	Accessing New Materials through Polymerization and Modification of a Polycarbonate with a Pendant Activated Ester. <i>Macromolecules</i> , 2013, 46, 1283-1290.	4.8	74
43	Thermally Induced Nanoimprinting of Biodegradable Polycarbonates Using Dynamic Covalent Cross-Links. <i>ACS Macro Letters</i> , 2013, 2, 19-22.	4.8	39
44	High-Throughput Directed Self-Assembly of Core-Shell Ferrimagnetic Nanoparticle Arrays. <i>Langmuir</i> , 2013, 29, 7472-7477.	3.5	23
45	Broad-Spectrum Antimicrobial Supramolecular Assemblies with Distinctive Size and Shape. <i>ACS Nano</i> , 2012, 6, 9191-9199.	14.6	87
46	Catalyst Chelation Effects in Organocatalyzed Ring-Opening Polymerization of Lactide. <i>ACS Macro Letters</i> , 2012, 1, 19-22.	4.8	64
47	Topographically directed self-assembly of goldnanoparticles. <i>Journal of Materials Chemistry</i> , 2011, 21, 16863.	6.7	15
48	Facile chemical rearrangement for photopatterning of POSS derivatives. <i>Journal of Materials Chemistry</i> , 2011, 21, 14254.	6.7	9
49	Bifunctional hydrogel coatings for water purification membranes: Improved fouling resistance and antimicrobial activity. <i>Journal of Membrane Science</i> , 2011, 372, 285-291.	8.2	88
50	Monodisperse Cobalt Ferrite Nanomagnets with Uniform Silica Coatings. <i>Langmuir</i> , 2010, 26, 17546-17551.	3.5	58
51	Hydrogen bonding-enhanced micelle assemblies for drug delivery. <i>Biomaterials</i> , 2010, 31, 8063-8071.	11.4	170
52	Delivery of Anticancer Drugs Using Polymeric Micelles Stabilized by Hydrogen Bonding Urea Groups. <i>Macromolecular Rapid Communications</i> , 2010, 31, 1187-1192.	3.9	50
53	Supramolecular nanostructures designed for high cargo loading capacity and kinetic stability. <i>Nano Today</i> , 2010, 5, 515-523.	11.9	90
54	Synthesis of a family of amphiphilic glycopolymers via controlled ring-opening polymerization of functionalized cyclic carbonates and their application in drug delivery. <i>Biomaterials</i> , 2010, 31, 2637-2645.	11.4	161

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55	Exploring the versatility of hydrogels derived from living organocatalytic ring-opening polymerization. <i>Soft Matter</i> , 2010, 6, 2006.	2.7	26
56	Self-Assembled Ferrimagnet ²⁺ Polymer Composites for Magnetic Recording Media. <i>Nano Letters</i> , 2010, 10, 3216-3221.	9.1	112
57	Blends of PS-PMMA Diblock Copolymers with a Directionally Hydrogen Bonding Polymer Additive. <i>Macromolecules</i> , 2010, 43, 1199-1202.	4.8	16
58	Magnetically-responsive self assembled composites. <i>Chemical Society Reviews</i> , 2010, 39, 4057.	38.1	100
59	A Simple and Efficient Synthesis of Functionalized Cyclic Carbonate Monomers Using a Versatile Pentafluorophenyl Ester Intermediate. <i>Journal of the American Chemical Society</i> , 2010, 132, 14724-14726.	13.7	179
60	Hydrogen ²⁺ Bonding Catalysts Based on Fluorinated Alcohol Derivatives for Living Polymerization. <i>Angewandte Chemie - International Edition</i> , 2009, 48, 5170-5173.	13.8	107
61	Facile postpolymerization end ²⁺ modification of RAFT polymers. <i>Journal of Polymer Science Part A</i> , 2009, 47, 346-356.	2.3	90
62	Catalysts feel the force. <i>Nature Chemistry</i> , 2009, 1, 102-103.	13.6	4
63	Engineering interactions. <i>Nature Materials</i> , 2008, 7, 523-525.	27.5	72
64	Supramacromolecular Assembly Driven by Complementary Molecular Recognition. <i>Macromolecules</i> , 2007, 40, 1782-1785.	4.8	24
65	Multivalent Interactions between Lectins and Supramolecular Complexes: Galectin-1 and Self-Assembled Pseudopolyrotaxanes. <i>Chemistry and Biology</i> , 2007, 14, 1140-1151.	6.0	45
66	Monitoring cyclodextrin ²⁺ polyviologen pseudopolyrotaxanes with the Bradford assay. <i>Organic and Biomolecular Chemistry</i> , 2006, 4, 250-256.	2.8	17
67	Template-Directed One-Step Synthesis of Cyclic Trimers by ADMET. <i>Journal of the American Chemical Society</i> , 2006, 128, 15358-15359.	13.7	47
68	Organocatalytic Living Ring-Opening Polymerization of Cyclic Carbosiloxanes. <i>Organic Letters</i> , 2006, 8, 4683-4686.	4.6	120
69	Self-Assembly with Block Copolymers through Metal Coordination of SCS ²⁺ PdII Pincer Complexes and Pseudorotaxane Formation. <i>Chemistry - A European Journal</i> , 2006, 12, 3789-3797.	3.3	50
70	Template-Directed Olefin Cross Metathesis. <i>Organic Letters</i> , 2005, 7, 4213-4216.	4.6	48
71	Multivalency and Cooperativity in Supramolecular Chemistry. <i>Accounts of Chemical Research</i> , 2005, 38, 723-732.	15.6	609
72	Synthesis of lactoside glycodendrons using photoaddition and reductive amination methodologies. <i>Carbohydrate Research</i> , 2004, 339, 2069-2075.	2.3	18

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73	A Self-Assembled Multivalent Pseudopolyrotaxane for Binding Galectin-1. <i>Journal of the American Chemical Society</i> , 2004, 126, 11914-11922.	13.7	159
74	Amplification of Dynamic Chiral Crown Ether Complexes During Cyclic Acetal Formation. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 4220-4224.	13.8	83
75	Dynamic Multivalent Lactosides Displayed on Cyclodextrin Beads Dangling from Polymer Strings. <i>Organic Letters</i> , 2003, 5, 3783-3786.	4.6	58
76	Chemically Defined Sialoside Scaffolds for Investigation of Multivalent Interactions with Sialic Acid Binding Proteins. <i>Journal of Organic Chemistry</i> , 2003, 68, 8485-8493.	3.2	48
77	Using Equilibrium Isotope Effects To Detect Intramolecular OH/OH Hydrogen Bonds: A Structural and Solvent Effects. <i>Journal of the American Chemical Society</i> , 2002, 124, 2931-2938.	13.7	40
78	Scalar Coupling Across the Hydrogen Bond in 1,3- and 1,4-Diols. <i>Organic Letters</i> , 2000, 2, 2077-2080.	4.6	41