Cole A Deforest

List of Publications by Year in Descending Order

56 papers	4,619 citations	29 h-index	67 g-index
68 ext. papers	5,311 ext. citations	13.4 avg, IF	6.57 L-index

#	Paper	IF	Citations
56	MBNL1 drives dynamic transitions between fibroblasts and myofibroblasts in cardiac wound healing.. *Cell Stem Cell*, **2022**,	18	2
55	Targeting drug delivery with light: A highly focused approach. *Advanced Drug Delivery Reviews*, **2021**, 171, 94-107	18.5	24
54	Photopatterned biomolecule immobilization to guide three-dimensional cell fate in natural protein-based hydrogels. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	18
53	The Art of Engineering Biomimetic Cellular Microenvironments. *ACS Biomaterials Science and Engineering*, **2021**, 7, 3997-4008	5.5	5
52	Magnetically-propelled fecal surrogates for modeling the impact of solid-induced shear forces on primary colonic epithelial cells. *Biomaterials*, **2021**, 276, 121059	15.6	0
51	Engineering Heart Morphogenesis. *Trends in Biotechnology*, **2020**, 38, 835-845	15.1	7
50	Visible Light-Responsive Dynamic Biomaterials: Going Deeper and Triggering More. *Advanced Healthcare Materials*, **2020**, 9, e1901553	10.1	39
49	Site-Selective Protein Modification: From Functionalized Proteins to Functional Biomaterials. *Matter*, **2020**, 2, 50-77	12.7	56
48	Self-healing injectable gelatin hydrogels for localized therapeutic cell delivery. *Journal of Biomedical Materials Research - Part A*, **2020**, 108, 1112-1121	5.4	26
47	Biophysical and biomolecular interactions of malaria-infected erythrocytes in engineered human capillaries. *Science Advances*, **2020**, 6, eaay7243	14.3	30
46	Layer-by-layer fabrication of 3D hydrogel structures using open microfluidics. *Lab on A Chip*, **2020**, 20, 525-536	7.2	15
45	Next-Generation Biomaterials for Culture and Manipulation of Stem Cells. *Cold Spring Harbor Perspectives in Biology*, **2020**, 12,	10.2	5
44	Thermofluidic heat exchangers for actuation of transcription in artificial tissues. *Science Advances*, **2020**, 6,	14.3	10
43	Surface Patterning of Hydrogel Biomaterials to Probe and Direct Cell–Matrix Interactions. *Advanced Materials Interfaces*, **2020**, 7, 2001198	4.6	15
42	Infarct Collagen Topography Regulates Fibroblast Fate via p38-Yes-Associated Protein Transcriptional Enhanced Associate Domain Signals. *Circulation Research*, **2020**, 127, 1306-1322	15.7	17
41	Transforming Endothelium with Platelet-Rich Plasma in Engineered Microvessels. *Advanced Science*, **2019**, 6, 1901725	13.6	8
40	Genetically Encoded Photocleavable Linkers for Patterned Protein Release from Biomaterials. *Journal of the American Chemical Society*, **2019**, 141, 15619-15625	16.4	38

39	Logical stimuli-triggered delivery of small molecules from hydrogel biomaterials. *Biomaterials Science*, **2019**, 7, 542-546	7.4	13
38	Bioactive site-specifically modified proteins for 4D patterning of gel biomaterials. *Nature Materials*, **2019**, 18, 1005-1014	27	97
37	Programming Stimuli-Responsive Behavior into Biomaterials. *Annual Review of Biomedical Engineering*, **2019**, 21, 241-265	12	62
36	Proteome-wide Analysis of Cellular Response to Ultraviolet Light for Biomaterial Synthesis and Modification. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2111-2116	5.5	36
35	Boolean Biomaterials: Logic-Based Delivery of Site-Specifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials (Adv. Mater. 33/2019). *Advanced Materials*, **2019**, 31, 1970237	24	1
34	Logic-Based Delivery of Site-Specifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials. *Advanced Materials*, **2019**, 31, e1902462	24	36
33	Tunable temperature- and shear-responsive hydrogels based on poly(alkyl glycidyl ether)s. *Polymer International*, **2019**, 68, 1238-1246	3.3	14
32	Photoresponsive biomaterials for targeted drug delivery and 4D cell culture. *Nature Reviews Materials*, **2018**, 3,	73.3	207
31	Light-Activated Proteomic Labeling via Photocaged Bioorthogonal Non-Canonical Amino Acids. *ACS Chemical Biology*, **2018**, 13, 573-577	4.9	8
30	Engineered modular biomaterial logic gates for environmentally triggered therapeutic delivery. *Nature Chemistry*, **2018**, 10, 251-258	17.6	145
29	Dynamic alterations of hepatocellular function by on-demand elasticity and roughness modulation. *Biomaterials Science*, **2018**, 6, 1002-1006	7.4	4
28	Review: Synthetic scaffolds to control the biochemical, mechanical, and geometrical environment of stem cell-derived brain organoids. *APL Bioengineering*, **2018**, 2, 041501	6.6	24
27	Cyclic Stiffness Modulation of Cell-Laden Protein-Polymer Hydrogels in Response to User-Specified Stimuli including Light. *Advanced Biology*, **2018**, 2, 1800240	3.5	62
26	A Combinational Effect of "Bulk" and "Surface" Shape-Memory Transitions on the Regulation of Cell Alignment. *Advanced Healthcare Materials*, **2017**, 6, 1601439	10.1	21
25	Streamlined Synthesis and Assembly of a Hybrid Sensing Architecture with Solid Binding Proteins and Click Chemistry. *Journal of the American Chemical Society*, **2017**, 139, 3958-3961	16.4	10
24	Photomediated oxime ligation as a bioorthogonal tool for spatiotemporally-controlled hydrogel formation and modification. *Journal of Materials Chemistry B*, **2017**, 5, 4435-4442	7.3	46
23	Biomaterials: Multicellular Vascularized Engineered Tissues through User-Programmable Biomaterial Photodegradation (Adv. Mater. 37/2017). *Advanced Materials*, **2017**, 29,	24	1
22	Multicellular Vascularized Engineered Tissues through User-Programmable Biomaterial Photodegradation. *Advanced Materials*, **2017**, 29, 1703156	24	102

21	Dynamically Tunable Cell Culture Platforms for Tissue Engineering and Mechanobiology. *Progress in Polymer Science*, **2017**, 65, 53-82	29.6	117
20	Polymer Design and Development **2017**, 295-314		8
19	Soft Shape-Memory Materials **2016**, 237-251		4
18	3D-printing of transparent bio-microfluidic devices in PEG-DA. *Lab on A Chip*, **2016**, 16, 2287-94	7.2	153
17	Photopolymers for Multiphoton Lithography in Biomaterials and Hydrogels **2016**, 183-220		4
16	A photoreversible protein-patterning approach for guiding stem cell fate in three-dimensional gels. *Nature Materials*, **2015**, 14, 523-31	27	323
15	Photoreversible patterning of biomolecules within click-based hydrogels. *Angewandte Chemie - International Edition*, **2012**, 51, 1816-9	16.4	239
14	Back Cover: Photoreversible Patterning of Biomolecules within Click-Based Hydrogels (Angew. Chem. Int. Ed. 8/2012). *Angewandte Chemie - International Edition*, **2012**, 51, 1978-1978	16.4	5
13	3D Photofixation Lithography in Diels-Alder Networks. *Macromolecular Rapid Communications*, **2012**, 33, 2092-6	4.8	51
12	Responsive culture platform to examine the influence of microenvironmental geometry on cell function in 3D. *Integrative Biology (United Kingdom)*, **2012**, 4, 1540-9	3.7	42
11	Photoreversible Patterning of Biomolecules within Click-Based Hydrogels. *Angewandte Chemie*, **2012**, 124, 1852-1855	3.6	51
10	Advances in bioactive hydrogels to probe and direct cell fate. *Annual Review of Chemical and Biomolecular Engineering*, **2012**, 3, 421-44	8.9	257
9	Cytocompatible click-based hydrogels with dynamically tunable properties through orthogonal photoconjugation and photocleavage reactions. *Nature Chemistry*, **2011**, 3, 925-31	17.6	528
8	Spatial and temporal control of the alkyne-azide cycloaddition by photoinitiated Cu(II) reduction. *Nature Chemistry*, **2011**, 3, 256-59	17.6	316
7	A Mild, Large-Scale Synthesis of 1,3-Cyclooctanedione: Expanding Access to Difluorinated Cyclooctyne for Copper-Free Click Chemistry. *Tetrahedron Letters*, **2011**, 52, 1871-1873	2	9
6	Peptide-Functionalized Click Hydrogels with Independently Tunable Mechanics and Chemical Functionality for 3D Cell Culture. *Chemistry of Materials*, **2010**, 22, 4783-4790	9.6	176
5	Formation of three-dimensional hydrogel multilayers using enzyme-mediated redox chain initiation. *ACS Applied Materials & Interfaces*, **2010**, 2, 1963-72	9.5	52
4	Inhibition of Staphylococcus epidermidis biofilms using polymerizable vancomycin derivatives. *Clinical Orthopaedics and Related Research*, **2010**, 468, 2081-91	2.2	40

3	Sequential click reactions for synthesizing and patterning three-dimensional cell microenvironments. *Nature Materials*, **2009**, 8, 659-64	27	700
2	Photocrosslinking of gelatin macromers to synthesize porous hydrogels that promote valvular interstitial cell function. *Tissue Engineering - Part A*, **2009**, 15, 3221-30	3.9	257
1	Magnetically-Propelled Fecal Surrogates for Modeling the Impact of Solid-Induced Shear Forces on Primary Colonic Epithelial Cells		1