

Cole A Deforest

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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	Sequential click reactions for synthesizing and patterning three-dimensional cell microenvironments. <i>Nature Materials</i> , 2009 , 8, 659-64	27	700
55	Cytocompatible click-based hydrogels with dynamically tunable properties through orthogonal photoconjugation and photocleavage reactions. <i>Nature Chemistry</i> , 2011 , 3, 925-31	17.6	528
54	A photoreversible protein-patterning approach for guiding stem cell fate in three-dimensional gels. <i>Nature Materials</i> , 2015 , 14, 523-31	27	323
53	Spatial and temporal control of the alkyne-azide cycloaddition by photoinitiated Cu(II) reduction. <i>Nature Chemistry</i> , 2011 , 3, 256-59	17.6	316
52	Advances in bioactive hydrogels to probe and direct cell fate. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012 , 3, 421-44	8.9	257
51	Photocrosslinking of gelatin macromers to synthesize porous hydrogels that promote valvular interstitial cell function. <i>Tissue Engineering - Part A</i> , 2009 , 15, 3221-30	3.9	257
50	Photoreversible patterning of biomolecules within click-based hydrogels. <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 1816-9	16.4	239
49	Photoresponsive biomaterials for targeted drug delivery and 4D cell culture. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	207
48	Peptide-Functionalized Click Hydrogels with Independently Tunable Mechanics and Chemical Functionality for 3D Cell Culture. <i>Chemistry of Materials</i> , 2010 , 22, 4783-4790	9.6	176
47	3D-printing of transparent bio-microfluidic devices in PEG-DA. <i>Lab on A Chip</i> , 2016 , 16, 2287-94	7.2	153
46	Engineered modular biomaterial logic gates for environmentally triggered therapeutic delivery. <i>Nature Chemistry</i> , 2018 , 10, 251-258	17.6	145
45	Dynamically Tunable Cell Culture Platforms for Tissue Engineering and Mechanobiology. <i>Progress in Polymer Science</i> , 2017 , 65, 53-82	29.6	117
44	Multicellular Vascularized Engineered Tissues through User-Programmable Biomaterial Photodegradation. <i>Advanced Materials</i> , 2017 , 29, 1703156	24	102
43	Bioactive site-specifically modified proteins for 4D patterning of gel biomaterials. <i>Nature Materials</i> , 2019 , 18, 1005-1014	27	97
42	Programming Stimuli-Responsive Behavior into Biomaterials. <i>Annual Review of Biomedical Engineering</i> , 2019 , 21, 241-265	12	62
41	Cyclic Stiffness Modulation of Cell-Laden Protein-Polymer Hydrogels in Response to User-Specified Stimuli including Light. <i>Advanced Biology</i> , 2018 , 2, 1800240	3.5	62
40	Site-Selective Protein Modification: From Functionalized Proteins to Functional Biomaterials. <i>Matter</i> , 2020 , 2, 50-77	12.7	56

39	Formation of three-dimensional hydrogel multilayers using enzyme-mediated redox chain initiation. <i>ACS Applied Materials & Interfaces</i> , 2010 , 2, 1963-72	9.5	52
38	3D Photofixation Lithography in Diels-Alder Networks. <i>Macromolecular Rapid Communications</i> , 2012 , 33, 2092-6	4.8	51
37	Photoreversible Patterning of Biomolecules within Click-Based Hydrogels. <i>Angewandte Chemie</i> , 2012 , 124, 1852-1855	3.6	51
36	Photomediated oxime ligation as a bioorthogonal tool for spatiotemporally-controlled hydrogel formation and modification. <i>Journal of Materials Chemistry B</i> , 2017 , 5, 4435-4442	7.3	46
35	Responsive culture platform to examine the influence of microenvironmental geometry on cell function in 3D. <i>Integrative Biology (United Kingdom)</i> , 2012 , 4, 1540-9	3.7	42
34	Inhibition of Staphylococcus epidermidis biofilms using polymerizable vancomycin derivatives. <i>Clinical Orthopaedics and Related Research</i> , 2010 , 468, 2081-91	2.2	40
33	Visible Light-Responsive Dynamic Biomaterials: Going Deeper and Triggering More. <i>Advanced Healthcare Materials</i> , 2020 , 9, e1901553	10.1	39
32	Genetically Encoded Photocleavable Linkers for Patterned Protein Release from Biomaterials. <i>Journal of the American Chemical Society</i> , 2019 , 141, 15619-15625	16.4	38
31	Proteome-wide Analysis of Cellular Response to Ultraviolet Light for Biomaterial Synthesis and Modification. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 2111-2116	5.5	36
30	Logic-Based Delivery of Site-Specifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials. <i>Advanced Materials</i> , 2019 , 31, e1902462	24	36
29	Biophysical and biomolecular interactions of malaria-infected erythrocytes in engineered human capillaries. <i>Science Advances</i> , 2020 , 6, eaay7243	14.3	30
28	Self-healing injectable gelatin hydrogels for localized therapeutic cell delivery. <i>Journal of Biomedical Materials Research - Part A</i> , 2020 , 108, 1112-1121	5.4	26
27	Targeting drug delivery with light: A highly focused approach. <i>Advanced Drug Delivery Reviews</i> , 2021 , 171, 94-107	18.5	24
26	Review: Synthetic scaffolds to control the biochemical, mechanical, and geometrical environment of stem cell-derived brain organoids. <i>APL Bioengineering</i> , 2018 , 2, 041501	6.6	24
25	A Combinational Effect of "Bulk" and "Surface" Shape-Memory Transitions on the Regulation of Cell Alignment. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1601439	10.1	21
24	Photopatterned biomolecule immobilization to guide three-dimensional cell fate in natural protein-based hydrogels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	18
23	Infarct Collagen Topography Regulates Fibroblast Fate via p38-Yes-Associated Protein Transcriptional Enhanced Associate Domain Signals. <i>Circulation Research</i> , 2020 , 127, 1306-1322	15.7	17
22	Layer-by-layer fabrication of 3D hydrogel structures using open microfluidics. <i>Lab on A Chip</i> , 2020 , 20, 525-536	7.2	15

21	Surface Patterning of Hydrogel Biomaterials to Probe and Direct Cell-Matrix Interactions. <i>Advanced Materials Interfaces</i> , 2020 , 7, 2001198	4.6	15
20	Tunable temperature- and shear-responsive hydrogels based on poly(alkyl glycidyl ether)s. <i>Polymer International</i> , 2019 , 68, 1238-1246	3.3	14
19	Logical stimuli-triggered delivery of small molecules from hydrogel biomaterials. <i>Biomaterials Science</i> , 2019 , 7, 542-546	7.4	13
18	Streamlined Synthesis and Assembly of a Hybrid Sensing Architecture with Solid Binding Proteins and Click Chemistry. <i>Journal of the American Chemical Society</i> , 2017 , 139, 3958-3961	16.4	10
17	Thermofluidic heat exchangers for actuation of transcription in artificial tissues. <i>Science Advances</i> , 2020 , 6,	14.3	10
16	A Mild, Large-Scale Synthesis of 1,3-Cyclooctanedione: Expanding Access to Difluorinated Cyclooctyne for Copper-Free Click Chemistry. <i>Tetrahedron Letters</i> , 2011 , 52, 1871-1873	2	9
15	Transforming Endothelium with Platelet-Rich Plasma in Engineered Microvessels. <i>Advanced Science</i> , 2019 , 6, 1901725	13.6	8
14	Light-Activated Proteomic Labeling via Photocaged Bioorthogonal Non-Canonical Amino Acids. <i>ACS Chemical Biology</i> , 2018 , 13, 573-577	4.9	8
13	Polymer Design and Development 2017 , 295-314		8
12	Engineering Heart Morphogenesis. <i>Trends in Biotechnology</i> , 2020 , 38, 835-845	15.1	7
11	Back Cover: Photoreversible Patterning of Biomolecules within Click-Based Hydrogels (Angew. Chem. Int. Ed. 8/2012). <i>Angewandte Chemie - International Edition</i> , 2012 , 51, 1978-1978	16.4	5
10	Next-Generation Biomaterials for Culture and Manipulation of Stem Cells. <i>Cold Spring Harbor Perspectives in Biology</i> , 2020 , 12,	10.2	5
9	The Art of Engineering Biomimetic Cellular Microenvironments. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 3997-4008	5.5	5
8	Dynamic alterations of hepatocellular function by on-demand elasticity and roughness modulation. <i>Biomaterials Science</i> , 2018 , 6, 1002-1006	7.4	4
7	Soft Shape-Memory Materials 2016 , 237-251		4
6	Photopolymers for Multiphoton Lithography in Biomaterials and Hydrogels 2016 , 183-220		4
5	MBNL1 drives dynamic transitions between fibroblasts and myofibroblasts in cardiac wound healing.. <i>Cell Stem Cell</i> , 2022 ,	18	2
4	Biomaterials: Multicellular Vascularized Engineered Tissues through User-Programmable Biomaterial Photodegradation (Adv. Mater. 37/2017). <i>Advanced Materials</i> , 2017 , 29,	24	1

3	Boolean Biomaterials: Logic-Based Delivery of Site-Specifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials (Adv. Mater. 33/2019). <i>Advanced Materials</i> , 2019 , 31, 1970237	24	1
2	Magnetically-Propelled Fecal Surrogates for Modeling the Impact of Solid-Induced Shear Forces on Primary Colonic Epithelial Cells		1
1	Magnetically-propelled fecal surrogates for modeling the impact of solid-induced shear forces on primary colonic epithelial cells. <i>Biomaterials</i> , 2021 , 276, 121059	15.6	0