

Cole A Deforest

List of Publications by Year in descending order

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Version: 2024-02-01

55
papers

5,858
citations

126708

33
h-index

155451

55
g-index

68
all docs

68
docs citations

68
times ranked

7128
citing authors

#	ARTICLE	IF	CITATIONS
1	Sequential click reactions for synthesizing and patterning three-dimensional cell microenvironments. <i>Nature Materials</i> , 2009, 8, 659-664.	13.3	776
2	Cytocompatible click-based hydrogels with dynamically tunable properties through orthogonal photoconjugation and photocleavage reactions. <i>Nature Chemistry</i> , 2011, 3, 925-931.	6.6	610
3	A photoreversible protein-patterning approach for guiding stem cell fate in three-dimensional gels. <i>Nature Materials</i> , 2015, 14, 523-531.	13.3	376
4	Spatial and temporal control of the alkyne-azide cycloaddition by photoinitiated Cu(II) reduction. <i>Nature Chemistry</i> , 2011, 3, 256-259.	6.6	342
5	Photocrosslinking of Gelatin Macromers to Synthesize Porous Hydrogels That Promote Valvular Interstitial Cell Function. <i>Tissue Engineering - Part A</i> , 2009, 15, 3221-3230.	1.6	302
6	Photoresponsive biomaterials for targeted drug delivery and 4D cell culture. <i>Nature Reviews Materials</i> , 2018, 3, .	23.3	297
7	Advances in Bioactive Hydrogels to Probe and Direct Cell Fate. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2012, 3, 421-444.	3.3	296
8	Photoreversible Patterning of Biomolecules within Click-Based Hydrogels. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 1816-1819.	7.2	270
9	3D-printing of transparent bio-microfluidic devices in PEG-DA. <i>Lab on A Chip</i> , 2016, 16, 2287-2294.	3.1	216
10	Engineered modular biomaterial logic gates for environmentally triggered therapeutic delivery. <i>Nature Chemistry</i> , 2018, 10, 251-258.	6.6	215
11	Peptide-Functionalized Click Hydrogels with Independently Tunable Mechanics and Chemical Functionality for 3D Cell Culture. <i>Chemistry of Materials</i> , 2010, 22, 4783-4790.	3.2	196
12	Bioactive site-specifically modified proteins for 4D patterning of gel biomaterials. <i>Nature Materials</i> , 2019, 18, 1005-1014.	13.3	168
13	Dynamically tunable cell culture platforms for tissue engineering and mechanobiology. <i>Progress in Polymer Science</i> , 2017, 65, 53-82.	11.8	149
14	Multicellular Vascularized Engineered Tissues through User-Programmable Biomaterial Photodegradation. <i>Advanced Materials</i> , 2017, 29, 1703156.	11.1	147
15	Programming Stimuli-Responsive Behavior into Biomaterials. <i>Annual Review of Biomedical Engineering</i> , 2019, 21, 241-265.	5.7	100
16	Site-Selective Protein Modification: From Functionalized Proteins to Functional Biomaterials. <i>Matter</i> , 2020, 2, 50-77.	5.0	100
17	Targeting drug delivery with light: A highly focused approach. <i>Advanced Drug Delivery Reviews</i> , 2021, 171, 94-107.	6.6	90
18	Cyclic Stiffness Modulation of Cell-Laden Protein-Polymer Hydrogels in Response to User-Specified Stimuli Including Light. <i>Advanced Biology</i> , 2018, 2, 1800240.	3.0	80

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19	Visible Light-Responsive Dynamic Biomaterials: Going Deeper and Triggering More. <i>Advanced Healthcare Materials</i> , 2020, 9, e1901553.	3.9	68
20	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.	2.6	62
21	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, .	3.3	61
22	3D Photofixation Lithography in Diels-Alder Networks. <i>Macromolecular Rapid Communications</i> , 2012, 33, 2092-2096.	2.0	57
23	Logic-Based Delivery of Site-Specifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials. <i>Advanced Materials</i> , 2019, 31, e1902462.	11.1	57
24	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.	2.9	56
25	Formation of Three-Dimensional Hydrogel Multilayers Using Enzyme-Mediated Redox Chain Initiation. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 1963-1972.	4.0	55
26	Self-Healing injectable gelatin hydrogels for localized therapeutic cell delivery. <i>Journal of Biomedical Materials Research - Part A</i> , 2020, 108, 1112-1121.	2.1	55
27	Genetically Encoded Photocleavable Linkers for Patterned Protein Release from Biomaterials. <i>Journal of the American Chemical Society</i> , 2019, 141, 15619-15625.	6.6	53
28	Biophysical and biomolecular interactions of malaria-infected erythrocytes in engineered human capillaries. <i>Science Advances</i> , 2020, 6, eaay7243.	4.7	53
29	Responsive culture platform to examine the influence of microenvironmental geometry on cell function in 3D. <i>Integrative Biology (United Kingdom)</i> , 2012, 4, 1540.	0.6	47
30	Inhibition of <i>Staphylococcus epidermidis</i> Biofilms Using Polymerizable Vancomycin Derivatives. <i>Clinical Orthopaedics and Related Research</i> , 2010, 468, 2081-2091.	0.7	46
31	Review: Synthetic scaffolds to control the biochemical, mechanical, and geometrical environment of stem cell-derived brain organoids. <i>APL Bioengineering</i> , 2018, 2, 041501.	3.3	43
32	Infarct Collagen Topography Regulates Fibroblast Fate via p38-Yes-Associated Protein Transcriptional Enhanced Associate Domain Signals. <i>Circulation Research</i> , 2020, 127, 1306-1322.	2.0	40
33	Layer-by-layer fabrication of 3D hydrogel structures using open microfluidics. <i>Lab on A Chip</i> , 2020, 20, 525-536.	3.1	34
34	Logical stimuli-triggered delivery of small molecules from hydrogel biomaterials. <i>Biomaterials Science</i> , 2019, 7, 542-546.	2.6	33
35	A Combinational Effect of Bulk- and Surface-Shape-Memory Transitions on the Regulation of Cell Alignment. <i>Advanced Healthcare Materials</i> , 2017, 6, 1601439.	3.9	25
36	MBNL1 drives dynamic transitions between fibroblasts and myofibroblasts in cardiac wound healing. <i>Cell Stem Cell</i> , 2022, 29, 419-433.e10.	5.2	25

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37	Surface Patterning of Hydrogel Biomaterials to Probe and Direct Cellâ€ˆMatrix Interactions. <i>Advanced Materials Interfaces</i> , 2020, 7, 2001198.	1.9	24
38	<i>Polymer Design and Development</i> , 2017, , 295-314.		20
39	Tunable temperatureâ€ˆand shearâ€ˆresponsive hydrogels based on poly(alkyl glycidyl ether)s. <i>Polymer International</i> , 2019, 68, 1238-1246.	1.6	19
40	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.	6.6	15
41	Light-Activated Proteomic Labeling <i>via</i> Photocaged Bioorthogonal Non-Canonical Amino Acids. <i>ACS Chemical Biology</i> , 2018, 13, 573-577.	1.6	14
42	Transforming Endothelium with Plateletâ€ˆRich Plasma in Engineered Microvessels. <i>Advanced Science</i> , 2019, 6, 1901725.	5.6	14
43	Thermofluidic heat exchangers for actuation of transcription in artificial tissues. <i>Science Advances</i> , 2020, 6, .	4.7	14
44	The Art of Engineering Biomimetic Cellular Microenvironments. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 3997-4008.	2.6	12
45	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.	0.7	10
46	Next-Generation Biomaterials for Culture and Manipulation of Stem Cells. <i>Cold Spring Harbor Perspectives in Biology</i> , 2020, 12, a035691.	2.3	10
47	Engineering Heart Morphogenesis. <i>Trends in Biotechnology</i> , 2020, 38, 835-845.	4.9	10
48	Dynamic alterations of hepatocellular function by on-demand elasticity and roughness modulation. <i>Biomaterials Science</i> , 2018, 6, 1002-1006.	2.6	7
49	<i>Soft Shape-Memory Materials</i> , 2016, , 237-251.		6
50	Back Cover: Photoreversible Patterning of Biomolecules within Click-Based Hydrogels (<i>Angew. Chem.</i>) Tj ETQq0 0 0,rgBT /Overlock 10 T	7.2	5
51	Boolean Biomaterials: Logicâ€ˆBased Delivery of Siteâ€ˆSpecifically Modified Proteins from Environmentally Responsive Hydrogel Biomaterials (<i>Adv. Mater.</i> 33/2019). <i>Advanced Materials</i> , 2019, 31, 1970237.	11.1	3
52	Magnetically-propelled fecal surrogates for modeling the impact of solid-induced shear forces on primary colonic epithelial cells. <i>Biomaterials</i> , 2021, 276, 121059.	5.7	3
53	Biomaterials: Multicellular Vascularized Engineered Tissues through Userâ€ˆProgrammable Biomaterial Photodegradation (<i>Adv. Mater.</i> 37/2017). <i>Advanced Materials</i> , 2017, 29, .	11.1	1
54	Introduction to Editorial Board Member: Professor Kristi S. Anseth. <i>Bioengineering and Translational Medicine</i> , 2018, 3, 182-184.	3.9	0

#	ARTICLE	IF	CITATIONS
55	Abstract 3103: Intraparenchymal delivery of chemokines and immunomodulators to eliminate pediatric brain tumor cells. , 2019, , .		0