

Allen P Liu

List of Publications by Year in Descending Order

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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.

89
papers

2,285
citations

22
h-index

46
g-index

116
ext. papers

2,873
ext. citations

5.9
avg, IF

5.52
L-index

#	Paper	IF	Citations
89	Compression enhances invasive phenotype and matrix degradation of breast Cancer cells via Piezo1 activation.. <i>BMC Molecular and Cell Biology</i> , 2022 , 23, 1	2.7	3
88	In Vitro Reconstitution Platforms of Mammalian Cell-Free Expressed Membrane Proteins.. <i>Methods in Molecular Biology</i> , 2022 , 2433, 105-120	1.4	1
87	The living interface between synthetic biology and biomaterial design.. <i>Nature Materials</i> , 2022 , 21, 390-397		4
86	Encapsulated actomyosin patterns drive cell-like membrane shape changes.. <i>IScience</i> , 2022 , 25, 104236	6.1	0
85	Synthetic Cell as a Platform for Understanding Membrane-Membrane Interactions.. <i>Membranes</i> , 2021 , 11,	3.8	4
84	Rapid Encapsulation of Reconstituted Cytoskeleton inside Giant Unilamellar Vesicles. <i>Journal of Visualized Experiments</i> , 2021 ,	1.6	1
83	Facile formation of giant elastin-like polypeptide vesicles as synthetic cells. <i>Chemical Communications</i> , 2021 , 57, 13202-13205	5.8	1
82	Physiologic biomechanics enhance reproducible contractile development in a stem cell derived cardiac muscle platform. <i>Nature Communications</i> , 2021 , 12, 6167	17.4	3
81	Simulating microgravity using a random positioning machine for inducing cellular responses to mechanotransduction in human osteoblasts. <i>Review of Scientific Instruments</i> , 2021 , 92, 114101	1.7	0
80	A high-resolution real-time quantification of astrocyte cytokine secretion under shear stress for investigating hydrocephalus shunt failure. <i>Communications Biology</i> , 2021 , 4, 387	6.7	0
79	Myofibrillar Structural Variability Underlies Contractile Function in Stem Cell-Derived Cardiomyocytes. <i>Stem Cell Reports</i> , 2021 , 16, 470-477	8	1
78	Engineering spatiotemporal organization and dynamics in synthetic cells. <i>Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology</i> , 2021 , 13, e1685	9.2	8
77	Human induced pluripotent stem cell-derived lung organoids in an ex vivo model of the congenital diaphragmatic hernia fetal lung. <i>Stem Cells Translational Medicine</i> , 2021 , 10, 98-114	6.9	7
76	Fascin-induced actin protrusions are suppressed by dendritic networks in giant unilamellar vesicles. <i>Molecular Biology of the Cell</i> , 2021 , 32, 1634-1640	3.5	6
75	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture. <i>Communications Biology</i> , 2021 , 4, 1136	6.7	7
74	Shock wave impact on the viability of MDA-MB-231 cells. <i>PLoS ONE</i> , 2020 , 15, e0234138	3.7	2
73	The New Age of Cell-Free Biology. <i>Annual Review of Biomedical Engineering</i> , 2020 , 22, 51-77	12	24

72	The Machado-Joseph disease-associated form of ataxin-3 impacts dynamics of clathrin-coated pits. <i>Cell Biology International</i> , 2020 , 44, 1252-1259	4.5	2
71	Are the biomedical sciences ready for synthetic biology?. <i>Biomolecular Concepts</i> , 2020 , 11, 23-31	3.7	1
70	Mechanical Regulation of Endocytosis: New Insights and Recent Advances. <i>Advanced Biology</i> , 2020 , 4, e1900278	3.5	12
69	Effects of MYBPC3 loss-of-function mutations preceding hypertrophic cardiomyopathy. <i>JCI Insight</i> , 2020 , 5,	9.9	20
68	Arrestin mediates communication between plasma membrane and intracellular GPCRs to regulate signaling. <i>Communications Biology</i> , 2020 , 3, 789	6.7	1
67	Confinement Geometry Tunes Fascin-Actin Bundle Structures and Consequently the Shape of a Lipid Bilayer Vesicle. <i>Frontiers in Molecular Biosciences</i> , 2020 , 7, 610277	5.6	15
66	In search of a novel chassis material for synthetic cells: emergence of synthetic peptide compartment. <i>Soft Matter</i> , 2020 , 16, 10769-10780	3.6	2
65	Complimentary action of structured and unstructured domains of epsin supports clathrin-mediated endocytosis at high tension. <i>Communications Biology</i> , 2020 , 3, 743	6.7	7
64	Shock wave impact on the viability of MDA-MB-231 cells 2020 , 15, e0234138		
63	Shock wave impact on the viability of MDA-MB-231 cells 2020 , 15, e0234138		
62	Shock wave impact on the viability of MDA-MB-231 cells 2020 , 15, e0234138		
61	Shock wave impact on the viability of MDA-MB-231 cells 2020 , 15, e0234138		
60	An acute decrease in plasma membrane tension induces macropinocytosis via PLD2 activation. <i>Journal of Cell Science</i> , 2019 , 132,	5.3	16
59	Encapsulation of complex solutions using droplet microfluidics towards the synthesis of artificial cells. <i>Journal of Micromechanics and Microengineering</i> , 2019 , 29, 083001	2	13
58	Clathrin Heavy Chain Knockdown Impacts CXCR4 Signaling and Post-translational Modification. <i>Frontiers in Cell and Developmental Biology</i> , 2019 , 7, 77	5.7	4
57	A Novel Synthetic Toehold Switch for MicroRNA Detection in Mammalian Cells. <i>ACS Synthetic Biology</i> , 2019 , 8, 1079-1088	5.7	19
56	Predicting the Time of Entry of Nanoparticles in Lipid Membranes. <i>ACS Nano</i> , 2019 , 13, 10221-10232	16.7	13
55	An Adaptive Synthetic Cell Based on Mechanosensing, Biosensing, and Inducible Gene Circuits. <i>ACS Synthetic Biology</i> , 2019 , 8, 1913-1920	5.7	29

54	Encapsulation of the cytoskeleton: towards mimicking the mechanics of a cell. <i>Soft Matter</i> , 2019 , 15, 8425-8436	3.6	39
53	Loss of PTEN promotes formation of signaling-capable clathrin-coated pits. <i>Journal of Cell Science</i> , 2018 , 131,	5.3	21
52	Synergistic and non-specific nucleic acid production by T7 RNA polymerase and DNA polymerase catalyzed by single-stranded polynucleotides. <i>Synthetic and Systems Biotechnology</i> , 2018 , 3, 130-134	4.2	1
51	Efficient molecular evolution to generate enantioselective enzymes using a dual-channel microfluidic droplet screening platform. <i>Nature Communications</i> , 2018 , 9, 1030	17.4	69
50	Proximity Biotinylation for Studying G Protein-Coupled Receptor Dimerization. <i>Neuromethods</i> , 2018 , 251-263	0.4	
49	The effect of mechanosensitive channel MscL expression in cancer cells on 3D confined migration. <i>APL Bioengineering</i> , 2018 , 2, 032001	6.6	8
48	Fetal lung transcriptome patterns in an ex vivo compression model of diaphragmatic hernia. <i>Journal of Surgical Research</i> , 2018 , 231, 411-420	2.5	5
47	Advanced Microfluidic Device Designed for Cyclic Compression of Single Adherent Cells. <i>Frontiers in Bioengineering and Biotechnology</i> , 2018 , 6, 148	5.8	10
46	A synthetic biology platform for the reconstitution and mechanistic dissection of LINC complex assembly. <i>Journal of Cell Science</i> , 2018 , 132,	5.3	10
45	Clathrin-mediated endocytosis regulates fMLP-mediated neutrophil polarization. <i>Heliyon</i> , 2018 , 4, e008196	1.96	5
44	Simultaneous monitoring of transcription and translation in mammalian cell-free expression in bulk and in cell-sized droplets. <i>Synthetic Biology</i> , 2018 , 3, ysy005	3.3	12
43	A robust and tunable mitotic oscillator in artificial cells. <i>ELife</i> , 2018 , 7,	8.9	18
42	Clathrin polymerization exhibits high mechano-geometric sensitivity. <i>Soft Matter</i> , 2017 , 13, 1455-1462	3.6	10
41	Notch signaling in regulating angiogenesis in a 3D biomimetic environment. <i>Lab on A Chip</i> , 2017 , 17, 1948-1959	14	
40	Cell-sized mechanosensitive and biosensing compartment programmed with DNA. <i>Chemical Communications</i> , 2017 , 53, 7349-7352	5.8	51
39	The big and intricate dreams of little organelles: Embracing complexity in the study of membrane traffic. <i>Traffic</i> , 2017 , 18, 567-579	5.7	8
38	New advances in probing cell-extracellular matrix interactions. <i>Integrative Biology (United Kingdom)</i> , 2017 , 9, 383-405	3.7	40
37	Protein aggregation with poly(vinyl) alcohol surfactant reduces double emulsion-encapsulated mammalian cell-free expression. <i>PLoS ONE</i> , 2017 , 12, e0174689	3.7	22

36	Bottom-up synthetic biology: modular design for making artificial platelets. <i>Physical Biology</i> , 2017 , 15, 013001	3	18
35	Membrane Tension Inhibits Rapid and Slow Endocytosis in Secretory Cells. <i>Biophysical Journal</i> , 2017 , 113, 2406-2414	2.9	19
34	Biophysical Tools for Cellular and Subcellular Mechanical Actuation of Cell Signaling. <i>Biophysical Journal</i> , 2016 , 111, 1112-1118	2.9	19
33	Shape Transformation of the Nuclear Envelope during Closed Mitosis. <i>Biophysical Journal</i> , 2016 , 111, 2309-2316	2.9	10
32	Mechanically activated artificial cell by using microfluidics. <i>Scientific Reports</i> , 2016 , 6, 32912	4.9	20
31	On the gating of mechanosensitive channels by fluid shear stress. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2016 , 32, 1012-1022	2	7
30	Actin dynamics provides membrane tension to merge fusing vesicles into the plasma membrane. <i>Nature Communications</i> , 2016 , 7, 12604	17.4	91
29	Cell-free compartmentalized protein synthesis inside double emulsion templated liposomes with in vitro synthesized and assembled ribosomes. <i>Chemical Communications</i> , 2016 , 52, 5467-9	5.8	40
28	Development of an advanced microfluidic micropipette aspiration device for single cell mechanics studies. <i>Biomicrofluidics</i> , 2016 , 10, 054105	3.2	20
27	Cell spreading area regulates clathrin-coated pit dynamics on micropatterned substrate. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 1033-43	3.7	21
26	A microfluidic pipette array for mechanophenotyping of cancer cells and mechanical gating of mechanosensitive channels. <i>Lab on A Chip</i> , 2015 , 15, 264-73	7.2	79
25	Engineering artificial cells by combining HeLa-based cell-free expression and ultrathin double emulsion template. <i>Methods in Cell Biology</i> , 2015 , 128, 303-18	1.8	30
24	Activation of a bacterial mechanosensitive channel in mammalian cells by cytoskeletal stress. <i>Cellular and Molecular Bioengineering</i> , 2014 , 7, 307-319	3.9	41
23	Multiplex detection of homo- and heterodimerization of g protein-coupled receptors by proximity biotinylation. <i>PLoS ONE</i> , 2014 , 9, e93646	3.7	15
22	The Application of Micropipette Aspiration in Molecular Mechanics of Single Cells. <i>Journal of Nanotechnology in Engineering and Medicine</i> , 2014 , 5, 0408011-408016		46
21	Lipid bilayer vesicle generation using microfluidic jetting. <i>Journal of Visualized Experiments</i> , 2014 , e51510.6	1.6	12
20	Cofactoring and dimerization of proteinase-activated receptors. <i>Pharmacological Reviews</i> , 2013 , 65, 1198-213	2.43	66
19	Uniaxial cell stretching device for live-cell imaging of mechanosensitive cellular functions. <i>Review of Scientific Instruments</i> , 2013 , 84, 114304	1.7	49

18	Hotspots organize clathrin-mediated endocytosis by efficient recruitment and retention of nucleating resources. <i>Traffic</i> , 2011 , 12, 1868-78	5.7	44
17	Local clustering of transferrin receptors promotes clathrin-coated pit initiation. <i>Journal of Cell Biology</i> , 2010 , 191, 1381-93	7.3	156
16	Multivalent display and receptor-mediated endocytosis of transferrin on virus-like particles. <i>ChemBioChem</i> , 2010 , 11, 1273-9	3.8	98
15	Biology under construction: in vitro reconstitution of cellular function. <i>Nature Reviews Molecular Cell Biology</i> , 2009 , 10, 644-50	48.7	163
14	Global and local regulation of clathrin-coated pit dynamics detected on patterned substrates. <i>Biophysical Journal</i> , 2009 , 97, 1038-47	2.9	45
13	Membrane-induced bundling of actin filaments. <i>Nature Physics</i> , 2008 , 4, 789-793	16.2	142
12	Unilamellar vesicle formation and encapsulation by microfluidic jetting. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 4697-702	11.5	230
11	Differential force microscope for long time-scale biophysical measurements. <i>Review of Scientific Instruments</i> , 2007 , 78, 043711	1.7	16
10	Actin polymerization serves as a membrane domain switch in model lipid bilayers. <i>Biophysical Journal</i> , 2006 , 91, 4064-70	2.9	180
9	Photopatterning of actin filament structures. <i>Nano Letters</i> , 2005 , 5, 625-8	11.5	7
8	Excess partial molar enthalpy of 1-propanol in 1-propanol/acetone (or tetramethyl urea)/H ₂ O at 25°C: effect of acetone (or tetramethyl urea) on H ₂ O. <i>Fluid Phase Equilibria</i> , 2001 , 189, 31-38	2.5	11
7	Myofibrillar Structural Variability Underlies Contractile Function in Stem Cell-Derived Cardiomyocytes		1
6	A synthetic biology platform for the reconstitution and mechanistic dissection of LINC complex assembly		1
5	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture		3
4	Compressive Stress Enhances Invasive Phenotype of Cancer Cells via Piezo1 Activation		3
3	Predicting the time of entry of nanoparticles in cellular membranes		1
2	Direct reconstitution and study of SUN protein interactions in vitro using mammalian cell-free expression		1
1	Engineering Functional Membrane-Membrane Interfaces by InterSpy. <i>Small</i> , 2020 , 16, 200104	11	0

