Allen P Liu

List of Publications by Citations

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	Unilamellar vesicle formation and encapsulation by microfluidic jetting. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 4697-702	11.5	230
88	Actin polymerization serves as a membrane domain switch in model lipid bilayers. *Biophysical Journal*, **2006**, 91, 4064-70	2.9	180
87	Biology under construction: in vitro reconstitution of cellular function. *Nature Reviews Molecular Cell Biology*, **2009**, 10, 644-50	48.7	163
86	Local clustering of transferrin receptors promotes clathrin-coated pit initiation. *Journal of Cell Biology*, **2010**, 191, 1381-93	7.3	156
85	Membrane-induced bundling of actin filaments. *Nature Physics*, **2008**, 4, 789-793	16.2	142
84	Multivalent display and receptor-mediated endocytosis of transferrin on virus-like particles. *ChemBioChem*, **2010**, 11, 1273-9	3.8	98
83	Actin dynamics provides membrane tension to merge fusing vesicles into the plasma membrane. *Nature Communications*, **2016**, 7, 12604	17.4	91
82	A microfluidic pipette array for mechanophenotyping of cancer cells and mechanical gating of mechanosensitive channels. *Lab on A Chip*, **2015**, 15, 264-73	7.2	79
81	Efficient molecular evolution to generate enantioselective enzymes using a dual-channel microfluidic droplet screening platform. *Nature Communications*, **2018**, 9, 1030	17.4	69
80	Cofactoring and dimerization of proteinase-activated receptors. *Pharmacological Reviews*, **2013**, 65, 1198-213	22.3	66
79	Cell-sized mechanosensitive and biosensing compartment programmed with DNA. *Chemical Communications*, **2017**, 53, 7349-7352	5.8	51
78	Uniaxial cell stretching device for live-cell imaging of mechanosensitive cellular functions. *Review of Scientific Instruments*, **2013**, 84, 114304	1.7	49
77	The Application of Micropipette Aspiration in Molecular Mechanics of Single Cells. *Journal of Nanotechnology in Engineering and Medicine*, **2014**, 5, 0408011-408016		46
76	Global and local regulation of clathrin-coated pit dynamics detected on patterned substrates. *Biophysical Journal*, **2009**, 97, 1038-47	2.9	45
75	Hotspots organize clathrin-mediated endocytosis by efficient recruitment and retention of nucleating resources. *Traffic*, **2011**, 12, 1868-78	5.7	44
74	Activation of a bacterial mechanosensitive channel in mammalian cells by cytoskeletal stress. *Cellular and Molecular Bioengineering*, **2014**, 7, 307-319	3.9	41
73	New advances in probing cell-extracellular matrix interactions. *Integrative Biology (United Kingdom)*, **2017**, 9, 383-405	3.7	40

72	Cell-free compartmentalized protein synthesis inside double emulsion templated liposomes with in vitro synthesized and assembled ribosomes. *Chemical Communications*, **2016**, 52, 5467-9	5.8	40
71	Encapsulation of the cytoskeleton: towards mimicking the mechanics of a cell. *Soft Matter*, **2019**, 15, 8425-8436	3.6	39
70	Engineering artificial cells by combining HeLa-based cell-free expression and ultrathin double emulsion template. *Methods in Cell Biology*, **2015**, 128, 303-18	1.8	30
69	An Adaptive Synthetic Cell Based on Mechanosensing, Biosensing, and Inducible Gene Circuits. *ACS Synthetic Biology*, **2019**, 8, 1913-1920	5.7	29
68	The New Age of Cell-Free Biology. *Annual Review of Biomedical Engineering*, **2020**, 22, 51-77	12	24
67	Protein aggregation with poly(vinyl) alcohol surfactant reduces double emulsion-encapsulated mammalian cell-free expression. *PLoS ONE*, **2017**, 12, e0174689	3.7	22
66	Cell spreading area regulates clathrin-coated pit dynamics on micropatterned substrate. *Integrative Biology (United Kingdom)*, **2015**, 7, 1033-43	3.7	21
65	Loss of PTEN promotes formation of signaling-capable clathrin-coated pits. *Journal of Cell Science*, **2018**, 131,	5.3	21
64	Mechanically activated artificial cell by using microfluidics. *Scientific Reports*, **2016**, 6, 32912	4.9	20
63	Effects of MYBPC3 loss-of-function mutations preceding hypertrophic cardiomyopathy. *JCI Insight*, **2020**, 5,	9.9	20
62	Development of an advanced microfluidic micropipette aspiration device for single cell mechanics studies. *Biomicrofluidics*, **2016**, 10, 054105	3.2	20
61	A Novel Synthetic Toehold Switch for MicroRNA Detection in Mammalian Cells. *ACS Synthetic Biology*, **2019**, 8, 1079-1088	5.7	19
60	Biophysical Tools for Cellular and Subcellular Mechanical Actuation of Cell Signaling. *Biophysical Journal*, **2016**, 111, 1112-1118	2.9	19
59	Membrane Tension Inhibits Rapid and Slow Endocytosis in Secretory Cells. *Biophysical Journal*, **2017**, 113, 2406-2414	2.9	19
58	Bottom-up synthetic biology: modular design for making artificial platelets. *Physical Biology*, **2017**, 15, 013001	3	18
57	A robust and tunable mitotic oscillator in artificial cells. *ELife*, **2018**, 7,	8.9	18
56	An acute decrease in plasma membrane tension induces macropinocytosis via PLD2 activation. *Journal of Cell Science*, **2019**, 132,	5.3	16
55	Differential force microscope for long time-scale biophysical measurements. *Review of Scientific Instruments*, **2007**, 78, 043711	1.7	16

54	Multiplex detection of homo- and heterodimerization of g protein-coupled receptors by proximity biotinylation. *PLoS ONE*, **2014**, 9, e93646	3.7	15
53	Confinement Geometry Tunes Fascin-Actin Bundle Structures and Consequently the Shape of a Lipid Bilayer Vesicle. *Frontiers in Molecular Biosciences*, **2020**, 7, 610277	5.6	15
52	Notch signaling in regulating angiogenesis in a 3D biomimetic environment. *Lab on A Chip*, **2017**, 17, 1948-1959	7.2	14
51	Encapsulation of complex solutions using droplet microfluidics towards the synthesis of artificial cells. *Journal of Micromechanics and Microengineering*, **2019**, 29, 083001	2	13
50	Predicting the Time of Entry of Nanoparticles in Lipid Membranes. *ACS Nano*, **2019**, 13, 10221-10232	16.7	13
49	Mechanical Regulation of Endocytosis: New Insights and Recent Advances. *Advanced Biology*, **2020**, 4, e1900278	3.5	12
48	Lipid bilayer vesicle generation using microfluidic jetting. *Journal of Visualized Experiments*, **2014**, e51510	1.6	12
47	Simultaneous monitoring of transcription and translation in mammalian cell-free expression in bulk and in cell-sized droplets. *Synthetic Biology*, **2018**, 3, ysy005	3.3	12
46	Excess partial molar enthalpy of 1-propanol in 1-propanol□acetone (or tetramethyl urea)□H2O at 25□C: effect of acetone (or tetramethyl urea) on H2O. *Fluid Phase Equilibria*, **2001**, 189, 31-38	2.5	11
45	Clathrin polymerization exhibits high mechano-geometric sensitivity. *Soft Matter*, **2017**, 13, 1455-1462	3.6	10
44	Shape Transformation of the Nuclear Envelope during Closed Mitosis. *Biophysical Journal*, **2016**, 111, 2309-2316	2.9	10
43	Advanced Microfluidic Device Designed for Cyclic Compression of Single Adherent Cells. *Frontiers in Bioengineering and Biotechnology*, **2018**, 6, 148	5.8	10
42	A synthetic biology platform for the reconstitution and mechanistic dissection of LINC complex assembly. *Journal of Cell Science*, **2018**, 132,	5.3	10
41	The big and intricate dreams of little organelles: Embracing complexity in the study of membrane traffic. *Traffic*, **2017**, 18, 567-579	5.7	8
40	The effect of mechanosensitive channel MscL expression in cancer cells on 3D confined migration. *APL Bioengineering*, **2018**, 2, 032001	6.6	8
39	Engineering spatiotemporal organization and dynamics in synthetic cells. *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, **2021**, 13, e1685	9.2	8
38	On the gating of mechanosensitive channels by fluid shear stress. *Acta Mechanica Sinica/Lixue Xuebao*, **2016**, 32, 1012-1022	2	7
37	Photopatterning of actin filament structures. *Nano Letters*, **2005**, 5, 625-8	11.5	7

36	Complimentary action of structured and unstructured domains of epsin supports clathrin-mediated endocytosis at high tension. *Communications Biology*, **2020**, 3, 743	6.7	7
35	Human induced pluripotent stem cell-derived lung organoids in an ex vivo model of the congenital diaphragmatic hernia fetal lung. *Stem Cells Translational Medicine*, **2021**, 10, 98-114	6.9	7
34	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture. *Communications Biology*, **2021**, 4, 1136	6.7	7
33	Fascin-induced actin protrusions are suppressed by dendritic networks in giant unilamellar vesicles. *Molecular Biology of the Cell*, **2021**, 32, 1634-1640	3.5	6
32	Fetal lung transcriptome patterns in an ex‐vivo compression model of diaphragmatic hernia. *Journal of Surgical Research*, **2018**, 231, 411-420	2.5	5
31	Clathrin-mediated endocytosis regulates fMLP-mediated neutrophil polarization. *Heliyon*, **2018**, 4, e00819	3.6	5
30	Clathrin Heavy Chain Knockdown Impacts CXCR4 Signaling and Post-translational Modification. *Frontiers in Cell and Developmental Biology*, **2019**, 7, 77	5.7	4
29	Synthetic Cell as a Platform for Understanding Membrane-Membrane Interactions.. *Membranes*, **2021**, 11,	3.8	4
28	The living interface between synthetic biology and biomaterial design.. *Nature Materials*, **2022**, 21, 390-397	27	4
27	Compression enhances invasive phenotype and matrix degradation of breast Cancer cells via Piezo1 activation.. *BMC Molecular and Cell Biology*, **2022**, 23, 1	2.7	3
26	Physiologic biomechanics enhance reproducible contractile development in a stem cell derived cardiac muscle platform. *Nature Communications*, **2021**, 12, 6167	17.4	3
25	Actin crosslinker competition and sorting drive emergent GUV size-dependent actin network architecture		3
24	Compressive Stress Enhances Invasive Phenotype of Cancer Cells via Piezo1 Activation		3
23	Shock wave impact on the viability of MDA-MB-231 cells. *PLoS ONE*, **2020**, 15, e0234138	3.7	2
22	The Machado-Joseph disease-associated form of ataxin-3 impacts dynamics of clathrin-coated pits. *Cell Biology International*, **2020**, 44, 1252-1259	4.5	2
21	In search of a novel chassis material for synthetic cells: emergence of synthetic peptide compartment. *Soft Matter*, **2020**, 16, 10769-10780	3.6	2
20	Are the biomedical sciences ready for synthetic biology?. *Biomolecular Concepts*, **2020**, 11, 23-31	3.7	1
19	Synergistic and non-specific nucleic acid production by T7 RNA polymerase and DNA polymerase catalyzed by single-stranded polynucleotides. *Synthetic and Systems Biotechnology*, **2018**, 3, 130-134	4.2	1

18	In Vitro Reconstitution Platforms of Mammalian Cell-Free Expressed Membrane Proteins.. *Methods in Molecular Biology*, **2022**, 2433, 105-120	1.4	1
17	Myofibrillar Structural Variability Underlies Contractile Function in Stem Cell-Derived Cardiomyocytes		1
16	Rapid Encapsulation of Reconstituted Cytoskeleton inside Giant Unilamellar Vesicles. *Journal of Visualized Experiments*, **2021**,	1.6	1
15	Facile formation of giant elastin-like polypeptide vesicles as synthetic cells. *Chemical Communications*, **2021**, 57, 13202-13205	5.8	1
14	A synthetic biology platform for the reconstitution and mechanistic dissection of LINC complex assembly		1
13	arrestin mediates communication between plasma membrane and intracellular GPCRs to regulate signaling. *Communications Biology*, **2020**, 3, 789	6.7	1
12	Predicting the time of entry of nanoparticles in cellular membranes		1
11	Myofibrillar Structural Variability Underlies Contractile Function in Stem Cell-Derived Cardiomyocytes. *Stem Cell Reports*, **2021**, 16, 470-477	8	1
10	Direct reconstitution and study of SUN protein interactions in vitro using mammalian cell-free expression		1
9	Simulating microgravity using a random positioning machine for inducing cellular responses to mechanotransduction in human osteoblasts. *Review of Scientific Instruments*, **2021**, 92, 114101	1.7	0
8	A high-resolution real-time quantification of astrocyte cytokine secretion under shear stress for investigating hydrocephalus shunt failure. *Communications Biology*, **2021**, 4, 387	6.7	0
7	Encapsulated actomyosin patterns drive cell-like membrane shape changes.. *IScience*, **2022**, 25, 104236	6.1	0
6	Engineering Functional Membrane Membrane Interfaces by InterSpy. *Small*,2202104	11	0
5	Proximity Biotinylation for Studying G Protein-Coupled Receptor Dimerization. *Neuromethods*, **2018**, 251-263	0.4	
4	Shock wave impact on the viability of MDA-MB-231 cells **2020**, 15, e0234138		
3	Shock wave impact on the viability of MDA-MB-231 cells **2020**, 15, e0234138		
2	Shock wave impact on the viability of MDA-MB-231 cells **2020**, 15, e0234138		
1	Shock wave impact on the viability of MDA-MB-231 cells **2020**, 15, e0234138		