Clifford P Brangwynne

List of Publications by Year
in descending order

59 papers	18,738 citations	81839 39 h-index	128225 60 g-index
79 all docs	79 docs citations	79 times ranked	10676 citing authors

#	Article	IF	Citations
1	Liquid phase condensation in cell physiology and disease. Science, 2017, 357, .	6.0	2,699
2	Germline P Granules Are Liquid Droplets That Localize by Controlled Dissolution/Condensation. Science, 2009, 324, 1729-1732.	6.0	2,267
3	Coexisting Liquid Phases Underlie Nucleolar Subcompartments. Cell, 2016, 165, 1686-1697.	13.5	1,463
4	Polymer physics of intracellular phase transitions. Nature Physics, 2015, 11, 899-904.	6.5	1,145
5	Active liquid-like behavior of nucleoli determines their size and shape in <i>Xenopus laevis</i> oocytes. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4334-4339.	3.3	1,004
6	The disordered P granule protein LAF-1 drives phase separation into droplets with tunable viscosity and dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7189-7194.	3.3	986
7	Spatiotemporal Control of Intracellular Phase Transitions Using Light-Activated optoDroplets. Cell, 2017, 168, 159-171.e14.	13.5	659
8	RNA Controls PolyQ Protein Phase Transitions. Molecular Cell, 2015, 60, 220-230.	4.5	605
9	Competing Protein-RNA Interaction Networks Control Multiphase Intracellular Organization. Cell, 2020, 181, 306-324.e28.	13.5	543
10	Liquid Nuclear Condensates Mechanically Sense and Restructure the Genome. Cell, 2018, 175, 1481-1491.e13.	13.5	490
11	The nucleolus as a multiphase liquid condensate. Nature Reviews Molecular Cell Biology, 2021, 22, 165-182.	16.1	480
12	Phase behaviour of disordered proteins underlying low density and high permeability of liquid organelles. Nature Chemistry, 2017, 9, 1118-1125.	6.6	447
13	Getting RNA and Protein in Phase. Cell, 2012, 149, 1188-1191.	13.5	432
14	Composition-dependent thermodynamics of intracellular phase separation. Nature, 2020, 581, 209-214.	13.7	426
15	RNA transcription modulates phase transition-driven nuclear body assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5237-45.	3.3	416
16	Phase transitions and size scaling of membrane-less organelles. Journal of Cell Biology, 2013, 203, 875-881.	2.3	354
17	Mapping Local and Global Liquid Phase Behavior in Living Cells Using Photo-Oligomerizable Seeds. Cell, 2018, 175, 1467-1480.e13.	13.5	330
18	Physical principles of intracellular organization via active and passive phase transitions. Reports on Progress in Physics, 2018, 81, 046601.	8.1	319

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19	A nuclear F-actin scaffold stabilizes ribonucleoprotein droplets against gravity in large cells. Nature Cell Biology, 2013, 15, 1253-1259.	4.6	252
20	Inverse Size Scaling of the Nucleolus by a Concentration-Dependent Phase Transition. Current Biology, 2015, 25, 641-646.	1.8	226
21	Probing and engineering liquid-phase organelles. Nature Biotechnology, 2019, 37, 1435-1445.	9.4	225
22	Nuclear bodies: the emerging biophysics of nucleoplasmic phases. Current Opinion in Cell Biology, 2015, 34, 23-30.	2.6	220
23	Intracellular transport by active diffusion. Trends in Cell Biology, 2009, 19, 423-427.	3.6	209
24	Quantifying Dynamics in Phase-Separated Condensates Using Fluorescence Recovery after Photobleaching. Biophysical Journal, 2019, 117, 1285-1300.	0.2	208
25	Nucleated transcriptional condensates amplify gene expression. Nature Cell Biology, 2020, 22, 1187-1196.	4.6	183
26	The liquid nucleome â€" phase transitions in the nucleus at a glance. Journal of Cell Science, 2019, 132, .	1.2	181
27	SARS-CoV-2 requires cholesterol for viral entry and pathological syncytia formation. ELife, 2021, 10, .	2.8	160
28	Beyond Stereospecificity: Liquids and Mesoscale Organization of Cytoplasm. Developmental Cell, 2011, 21, 14-16.	3.1	147
29	Spatial Organization of the Cell Cytoplasm by Position-Dependent Phase Separation. Physical Review Letters, 2013, 111, 088101.	2.9	131
30	Protein Phase Separation Provides Long-Term Memory of Transient Spatial Stimuli. Cell Systems, 2018, 6, 655-663.e5.	2.9	129
31	Model for disordered proteins with strongly sequence-dependent liquid phase behavior. Journal of Chemical Physics, 2020, 152, 075101.	1.2	120
32	Nucleation landscape of biomolecular condensates. Nature, 2021, 599, 503-506.	13.7	108
33	Chromatin mechanics dictates subdiffusion and coarsening dynamics of embedded condensates. Nature Physics, 2021, 17, 531-538.	6.5	106
34	Soft active aggregates: mechanics, dynamics and self-assembly of liquid-like intracellular protein bodies. Soft Matter, 2011, 7, 3052.	1.2	94
35	TGF-Î²-induced DACT1 biomolecular condensates repress Wnt signalling to promote bone metastasis. Nature Cell Biology, 2021, 23, 257-267.	4.6	71
36	HP1Î± is a chromatin crosslinker that controls nuclear and mitotic chromosome mechanics. ELife, 2021, 10, .	2.8	69

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37	Controlling the material properties and rRNA processing function of the nucleolus using light. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17330-17335.	3.3	62
38	Biophysical characterization of organelle-based RNA/protein liquid phases using microfluidics. Soft Matter, 2016, 12, 9142-9150.	1.2	61
39	Remodeling nuclear architecture allows efficient transport of herpesvirus capsids by diffusion. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E5725-E5733.	3.3	56
40	Mechanical Frustration of Phase Separation in the Cell Nucleus by Chromatin. Physical Review Letters, 2021, 126, 258102.	2.9	50
41	Hierarchical Size Scaling during Multicellular Growth and Development. Cell Reports, 2016, 17, 345-352.	2.9	49
42	Liquids, Fibers, and Gels: The Many Phases of Neurodegeneration. Developmental Cell, 2015, 35, 531-532.	3.1	47
43	Worms under Pressure: Bulk Mechanical Properties of C. elegans Are Independent of the Cuticle. Biophysical Journal, 2015, 108, 1887-1898.	0.2	47
44	A size threshold governs Caenorhabditis elegans developmental progression. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20151283.	1.2	47
45	Polycomb condensates can promote epigenetic marks but are not required for sustained chromatin compaction. Nature Communications, 2021, 12, 5888.	5.8	47
46	Phase separation vs aggregation behavior for model disordered proteins. Journal of Chemical Physics, 2021, 155, 125101.	1.2	46
47	Compartmentalization of telomeres through DNA-scaffolded phase separation. Developmental Cell, 2022, 57, 277-290.e9.	3.1	38
48	Can phase separation buffer cellular noise?. Science, 2020, 367, 364-365.	6.0	32
49	Farming and public goods production in <i>Caenorhabditis elegans</i> populations. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2289-2294.	3.3	25
50	Interaction of spindle assembly factor TPX2 with importins-Î±/Î² inhibits protein phase separation. Journal of Biological Chemistry, 2021, 297, 100998.	1.6	21
51	Properties of repression condensates in living Ciona embryos. Nature Communications, 2021, 12, 1561.	5.8	20
52	Soft viscoelastic properties of nuclear actin age oocytes due to gravitational creep. Scientific Reports, 2015, 5, 16607.	1.6	18
53	The mechanobiology of nuclear phase separation. APL Bioengineering, 2022, 6, 021503.	3.3	15
54	Phase separation in biology and diseaseâ€"a symposium report. Annals of the New York Academy of Sciences, 2019, 1452, 3-11.	1.8	14

#	Article	IF	Citations
55	RNA repeats put a freeze on cells. Nature, 2017, 546, 215-216.	13.7	6
56	Microfluidic immobilization and subcellular imaging of developing Caenorhabditis elegans. Microfluidics and Nanofluidics, 2017, 21, 1.	1.0	6
57	A sticky problem for chromosomes. Nature, 2016, 535, 234-235.	13.7	5
58	Mapping Local and Global Liquid-liquid Phase Behavior in Living Cells Using Light-activated Multivalent Seeds. SSRN Electronic Journal, 0, , .	0.4	0
59	Fingerprinting Small Molecule Modulators of Nucleolar Biophysics. FASEB Journal, 2022, 36, .	0.2	0