

Daniel J Needleman

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.

36 papers	1,371 citations	19 h-index	37 g-index
50 ext. papers	1,958 ext. citations	10.2 avg, IF	5.09 L-index

#	Paper	IF	Citations
36	Physical bioenergetics: Energy fluxes, budgets, and constraints in cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	3
35	Mechanical Mechanisms of Chromosome Segregation. <i>Cells</i> , 2021 , 10,	7.9	3
34	Inferring simple but precise quantitative models of human oocyte and early embryo development. <i>Journal of the Royal Society Interface</i> , 2021 , 18, 20210475	4.1	
33	Metabolic imaging of human cumulus cells reveals associations among metabolic profiles of cumulus cells, patient clinical factors, and oocyte maturity. <i>Fertility and Sterility</i> , 2021 , 116, 1651-1662	4.8	0
32	Developmental Stage Classification of Embryos Using Two-Stream Neural Network with Linear-Chain Conditional Random Field. <i>Lecture Notes in Computer Science</i> , 2021 , 12908, 363-372	0.9	3
31	Probing and manipulating embryogenesis via nanoscale thermometry and temperature control. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14636-14641	11.5	31
30	Stoichiometric interactions explain spindle dynamics and scaling across 100 million years of nematode evolution. <i>ELife</i> , 2020 , 9,	8.9	9
29	Central-spindle microtubules are strongly coupled to chromosomes during both anaphase A and anaphase B. <i>Molecular Biology of the Cell</i> , 2019 , 30, 2503-2514	3.5	25
28	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. <i>Science</i> , 2019 , 366, 870-875	33.3	135
27	Combined noninvasive metabolic and spindle imaging as potential tools for embryo and oocyte assessment. <i>Human Reproduction</i> , 2019 , 34, 2349-2361	5.7	14
26	From cytoskeletal assemblies to living materials. <i>Current Opinion in Cell Biology</i> , 2019 , 56, 109-114	9	9
25	Cooperative Accumulation of Dynein-Dynactin at Microtubule Minus-Ends Drives Microtubule Network Reorganization. <i>Developmental Cell</i> , 2018 , 44, 233-247.e4	10.2	32
24	Lipopolysaccharide is transported to the cell surface by a membrane-to-membrane protein bridge. <i>Science</i> , 2018 , 359, 798-801	33.3	76
23	Dynein pulling forces counteract lamin-mediated nuclear stability during nuclear envelope repair. <i>Molecular Biology of the Cell</i> , 2018 , 29, 852-868	3.5	28
22	Measuring NDC80 binding reveals the molecular basis of tension-dependent kinetochore-microtubule attachments. <i>ELife</i> , 2018 , 7,	8.9	35
21	The Physics of the Metaphase Spindle. <i>Annual Review of Biophysics</i> , 2018 , 47, 655-673	21.1	24
20	Chromosomal passenger complex hydrodynamics suggests chaperoning of the inactive state by nucleoplasmin/nucleophosmin. <i>Molecular Biology of the Cell</i> , 2017 , 28, 1444-1456	3.5	11

19	Cytoplasmic flows as signatures for the mechanics of mitotic positioning. <i>Molecular Biology of the Cell</i> , 2017 , 28, 3261-3270	3.5	28
18	Forces positioning the mitotic spindle: Theories, and now experiments. <i>BioEssays</i> , 2017 , 39, 1600212	4.1	22
17	Developing and Testing a Bayesian Analysis of Fluorescence Lifetime Measurements. <i>PLoS ONE</i> , 2017 , 12, e0169337	3.7	15
16	Active matter at the interface between materials science and cell biology. <i>Nature Reviews Materials</i> , 2017 , 2,	73.3	230
15	Use of imaging software for assessment of the associations among zona pellucida thickness variation, assisted hatching, and implantation of day 3 embryos. <i>Journal of Assisted Reproduction and Genetics</i> , 2017 , 34, 1261-1269	3.4	3
14	Mutation Is a Sufficient and Robust Predictor of Genetic Variation for Mitotic Spindle Traits in <i>Caenorhabditis elegans</i> . <i>Genetics</i> , 2016 , 203, 1859-70	4	11
13	Phosphoinositide 3-Kinase Regulates Glycolysis through Mobilization of Aldolase from the Actin Cytoskeleton. <i>Cell</i> , 2016 , 164, 433-46	56.2	203
12	Spatial organization of the Ran pathway by microtubules in mitosis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 8729-34	11.5	33
11	Studying Kinetochores In Vivo Using FLIM-FRET. <i>Methods in Molecular Biology</i> , 2016 , 1413, 169-86	1.4	4
10	Scaling, selection, and evolutionary dynamics of the mitotic spindle. <i>Current Biology</i> , 2015 , 25, 732-740	6.3	49
9	The Material Basis of Life. <i>Trends in Cell Biology</i> , 2015 , 25, 713-716	18.3	3
8	Active contraction of microtubule networks. <i>ELife</i> , 2015 , 4,	8.9	77
7	Measuring microtubule polarity in spindles with second-harmonic generation. <i>Biophysical Journal</i> , 2014 , 106, 1578-87	2.9	22
6	Deciphering the evolutionary history of open and closed mitosis. <i>Current Biology</i> , 2014 , 24, R1099-103	6.3	51
5	Physical basis of spindle self-organization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 18496-500	11.5	100
4	Developing cell biology. <i>ELife</i> , 2013 , 2, e00571	8.9	
3	Fast microtubule dynamics in meiotic spindles measured by single molecule imaging: evidence that the spindle environment does not stabilize microtubules. <i>Molecular Biology of the Cell</i> , 2010 , 21, 323-33	3.5	66
2	Three-dimensional structure of the kinetochore-fibers in human mitotic spindles		3

1

A coarse-grained NADH redox model enables inference of subcellular metabolic fluxes from fluorescence lifetime imaging

2