Daniel J Needleman

List of Publications by Citations

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	Active matter at the interface between materials science and cell biology. *Nature Reviews Materials* , **2017**, 2,	73.3	230
35	Phosphoinositide 3-Kinase Regulates Glycolysis through Mobilization of Aldolase from the Actin Cytoskeleton. *Cell*, **2016**, 164, 433-46	56.2	203
34	Electrical control of interlayer exciton dynamics in atomically thin heterostructures. *Science*, **2019**, 366, 870-875	33.3	135
33	Physical basis of spindle self-organization. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 18496-500	11.5	100
32	Active contraction of microtubule networks. *ELife*, **2015**, 4,	8.9	77
31	Lipopolysaccharide is transported to the cell surface by a membrane-to-membrane protein bridge. *Science*, **2018**, 359, 798-801	33.3	76
30	Fast microtubule dynamics in meiotic spindles measured by single molecule imaging: evidence that the spindle environment does not stabilize microtubules. *Molecular Biology of the Cell*, **2010**, 21, 323-33	3.5	66
29	Deciphering the evolutionary history of open and closed mitosis. *Current Biology*, **2014**, 24, R1099-103	6.3	51
28	Scaling, selection, and evolutionary dynamics of the mitotic spindle. *Current Biology*, **2015**, 25, 732-740	6.3	49
27	Measuring NDC80 binding reveals the molecular basis of tension-dependent kinetochore-microtubule attachments. *ELife*, **2018**, 7,	8.9	35
26	Spatial organization of the Ran pathway by microtubules in mitosis. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 8729-34	11.5	33
25	Cooperative Accumulation of Dynein-Dynactin at Microtubule Minus-Ends Drives Microtubule Network Reorganization. *Developmental Cell*, **2018**, 44, 233-247.e4	10.2	32
24	Probing and manipulating embryogenesis via nanoscale thermometry and temperature control. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 14636-14641	11.5	31
23	Cytoplasmic flows as signatures for the mechanics of mitotic positioning. *Molecular Biology of the Cell*, **2017**, 28, 3261-3270	3.5	28
22	Dynein pulling forces counteract lamin-mediated nuclear stability during nuclear envelope repair. *Molecular Biology of the Cell*, **2018**, 29, 852-868	3.5	28
21	Central-spindle microtubules are strongly coupled to chromosomes during both anaphase A and anaphase B. *Molecular Biology of the Cell*, **2019**, 30, 2503-2514	3.5	25
20	The Physics of the Metaphase Spindle. *Annual Review of Biophysics*, **2018**, 47, 655-673	21.1	24

19	Forces positioning the mitotic spindle: Theories, and now experiments. *BioEssays*, **2017**, 39, 1600212	4.1	22
18	Measuring microtubule polarity in spindles with second-harmonic generation. *Biophysical Journal*, **2014**, 106, 1578-87	2.9	22
17	Developing and Testing a Bayesian Analysis of Fluorescence Lifetime Measurements. *PLoS ONE*, **2017**, 12, e0169337	3.7	15
16	Combined noninvasive metabolic and spindle imaging as potential tools for embryo and oocyte assessment. *Human Reproduction*, **2019**, 34, 2349-2361	5.7	14
15	Chromosomal passenger complex hydrodynamics suggests chaperoning of the inactive state by nucleoplasmin/nucleophosmin. *Molecular Biology of the Cell*, **2017**, 28, 1444-1456	3.5	11
14	Mutation Is a Sufficient and Robust Predictor of Genetic Variation for Mitotic Spindle Traits in Caenorhabditis elegans. *Genetics*, **2016**, 203, 1859-70	4	11
13	Stoichiometric interactions explain spindle dynamics and scaling across 100 million years of nematode evolution. *ELife*, **2020**, 9,	8.9	9
12	From cytoskeletal assemblies to living materials. *Current Opinion in Cell Biology*, **2019**, 56, 109-114	9	9
11	Studying Kinetochores In Vivo Using FLIM-FRET. *Methods in Molecular Biology*, **2016**, 1413, 169-86	1.4	4
10	The Material Basis of Life. *Trends in Cell Biology*, **2015**, 25, 713-716	18.3	3
9	Use of imaging software for assessment of the associations among zona pellucida thickness variation, assisted hatching, and implantation of day 3 embryos. *Journal of Assisted Reproduction and Genetics*, **2017**, 34, 1261-1269	3.4	3
8	Three-dimensional structure of the kinetochore-fibers in human mitotic spindles		3
7	Physical bioenergetics: Energy fluxes, budgets, and constraints in cells. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
6	Mechanical Mechanisms of Chromosome Segregation. *Cells*, **2021**, 10,	7.9	3
5	Developmental Stage Classification of Embryos Using Two-Stream Neural Network with Linear-Chain Conditional Random Field. *Lecture Notes in Computer Science*, **2021**, 12908, 363-372	0.9	3
4	A coarse-grained NADH redox model enables inference of subcellular metabolic fluxes from fluorescence lifetime imaging		2
3	Metabolic imaging of human cumulus cells reveals associations among metabolic profiles of cumulus cells, patient clinical factors, and oocyte maturity. *Fertility and Sterility*, **2021**, 116, 1651-1662	4.8	0
2	Developing cell biology. *ELife*, **2013**, 2, e00571	8.9	

1 Inferring simple but precise quantitative models of human oocyte and early embryo development. *Journal of the Royal Society Interface*, **2021**, 18, 20210475 4.1