David J Odde

List of Publications by Year
in descending order

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130	7,468	53660	62479
papers	citations	45 h-index	80 g-index

151	151	151	7053
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Predicting Glioblastoma Cellular Motility from In Vivo MRI with a Radiomics Based Regression Model. Cancers, 2022, 14, 578.	1.7	2
2	Vaccination Against SARS-CoV-2 Is Associated With a Lower Viral Load and Likelihood of Systemic Symptoms. Open Forum Infectious Diseases, 2022, 9, ofac066.	0.4	17
3	Dystrophin missense mutations alter focal adhesion tension and mechanotransduction. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	12
4	A molecular clock controls periodically driven cell migration in confined spaces. Cell Systems, 2022, 13, 514-529.e10.	2.9	10
5	Directed cell migration towards softer environments. Nature Materials, 2022, 21, 1081-1090.	13.3	86
6	Education and Outreach in Physical Sciences in Oncology. Trends in Cancer, 2021, 7, 3-9.	3.8	4
7	mTOR inhibition in COVIDâ€19: A commentary and review of efficacy in RNA viruses. Journal of Medical Virology, 2021, 93, 1843-1846.	2.5	63
8	Atomistic Basis of Microtubule Dynamic Instability Assessed Via Multiscale Modeling. Annals of Biomedical Engineering, 2021, 49, 1716-1734.	1.3	3
9	Enhanced substrate stress relaxation promotes filopodia-mediated cell migration. Nature Materials, 2021, 20, 1290-1299.	13.3	111
10	A Physical Perspective on Oncology Research: The Critically Emerging Role of Physical Science in the Fight Against Brain Cancer. Advances in Oncology, 2021, 1, 213-221.	0.1	0
11	Ex vivo SARS-CoV-2 infection of human lung reveals heterogeneous host defense and therapeutic responses. JCI Insight, 2021, 6, .	2.3	26
12	Clinically validated model predicts the effect of intratumoral heterogeneity on overall survival for non-small cell lung cancer (NSCLC) patients. Computer Methods and Programs in Biomedicine, 2021, 212, 106455.	2.6	4
13	SEMA4C is a novel target to limit osteosarcoma growth, progression, and metastasis. Oncogene, 2020, 39, 1049-1062.	2.6	13
14	Tau Avoids the GTP Cap at Growing Microtubule Plus-Ends. IScience, 2020, 23, 101782.	1.9	12
15	Regulation and dynamics of force transmission at individual cell-matrix adhesion bonds. Science Advances, 2020, 6, eaax0317.	4.7	65
16	Predicting Confined 1D Cell Migration from Parameters Calibrated to a 2D Motor-Clutch Model. Biophysical Journal, 2020, 118, 1709-1720.	0.2	20
17	Emerging technologies in mechanotransduction research. Current Opinion in Chemical Biology, 2019, 53, 125-130.	2.8	19
18	Modeling distributed forces within cell adhesions of varying size on continuous substrates. Cytoskeleton, 2019, 76, 571-585.	1.0	7

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19	Glioma Cell Migration Dynamics in Brain Tissue Assessed by Multimodal Optical Imaging. Biophysical Journal, 2019, 117, 1179-1188.	0.2	34
20	Multiscale Computational Modeling of Tubulin-Tubulin Lateral Interaction. Biophysical Journal, 2019, 117, 1234-1249.	0.2	16
21	Sleeping Beauty Insertional Mutagenesis Reveals Important Genetic Drivers of Central Nervous System Embryonal Tumors. Cancer Research, 2019, 79, 905-917.	0.4	33
22	Myosin IIA suppresses glioblastoma development in a mechanically sensitive manner. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15550-15559.	3.3	39
23	Multi-Scale Computational Modeling of Tubulin-Tubulin Interactions in Microtubule Self-Assembly from Atoms to Cells. Biophysical Journal, 2019, 116, 256a.	0.2	1
24	Motor Clutch Modeling of Single-Molecule FRET-Based Molecular Tension Sensors. Biophysical Journal, 2019, 116, 415a.	0.2	0
25	Rapid and inefficient kinetics of sickle hemoglobin fiber growth. Science Advances, 2019, 5, eaau1086.	4.7	21
26	Microtubule dynamics: moving toward a multi-scale approach. Current Opinion in Cell Biology, 2018, 50, 8-13.	2.6	19
27	Dynamics of 3D carcinoma cell invasion into aligned collagen. Integrative Biology (United Kingdom), 2018, 10, 100-112.	0.6	46
28	Kinesin-5 Mediated Chromosome Congression in Insect Spindles. Cellular and Molecular Bioengineering, 2018, 11, 25-36.	1.0	6
29	Cell Migration in 1D and 2D Nanofiber Microenvironments. Annals of Biomedical Engineering, 2018, 46, 392-403.	1.3	42
30	A Brownian dynamics tumor progression simulator with application to glioblastoma. Convergent Science Physical Oncology, 2018, 4, 015001.	2.6	16
31	Microtubule-Based Control of Motor-Clutch System Mechanics in Glioma Cell Migration. Cell Reports, 2018, 25, 2591-2604.e8.	2.9	37
32	Modeling Cell Migration Mechanics. Advances in Experimental Medicine and Biology, 2018, 1092, 159-187.	0.8	22
33	Monte Carlo simulations of microtubule arrays: The critical roles of rescue transitions, the cell boundary, and tubulin concentration in shaping microtubule distributions. PLoS ONE, 2018, 13, e0197538.	1.1	10
34	Rapid diffusion-state switching underlies stable cytoplasmic gradients in the Caenorhabditis elegans zygote. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8440-E8449.	3.3	46
35	An Indoleâ€“Chalcone Inhibits Multidrug-Resistant Cancer Cell Growth by Targeting Microtubules. Molecular Pharmaceutics, 2018, 15, 3892-3900.	2.3	36
36	Computational Modeling of Tubulin-Tubulin Lateral Interaction: Molecular Dynamics and Brownian Dynamics. Biophysical Journal, 2018, 114, 503a.	0.2	0

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37	Biphasic Dependence of Glioma Survival and Cell Migration on CD44 Expression Level. Cell Reports, 2017, 18, 23-31.	2.9	81
38	Shifting the optimal stiffness for cell migration. Nature Communications, 2017, 8, 15313.	5.8	217
39	Stochastic Modeling Yields a Mechanistic Framework for Spindle Attachment Error Correction in Budding Yeast Mitosis. Cell Systems, 2017, 4, 645-650.e5.	2.9	15
40	Integrin-mediated traction force enhances paxillin molecular associations and adhesion dynamics that increase the invasiveness of tumor cells into a three-dimensional extracellular matrix. Molecular Biology of the Cell, 2017, 28, 1467-1488.	0.9	110
41	Mechanisms of kinetic stabilization by the drugs paclitaxel and vinblastine. Molecular Biology of the Cell, 2017, 28, 1238-1257.	0.9	61
42	Slit-Robo GTPase-Activating Protein 2 as a metastasis suppressor in osteosarcoma. Scientific Reports, 2016, 6, 39059.	1.6	32
43	Kinetic partitioning during de novo septin filament assembly creates a critical G1 â€œwindow of opportunityâ€•for mutant septin function. Cell Cycle, 2016, 15, 2441-2453.	1.3	12
44	RCC1-dependent activation of Ran accelerates cell cycle and DNA repair, inhibiting DNA damageâ€“induced cell senescence. Molecular Biology of the Cell, 2016, 27, 1346-1357.	0.9	39
45	Molecular Regulation of Actin Turnover at the Leading Edge of Migrating Cells. Biophysical Journal, 2015, 108, 179a-180a.	0.2	0
46	The predicted role of steric specificity in crowding-mediated effects on reversible biomolecular association. Physical Biology, 2015, 12, 066004.	0.8	5
47	Finite Element Modeling of Cell Traction. Biophysical Journal, 2015, 108, 306a.	0.2	0
48	Optical Control of Microtubule Dynamics in Time and Space. Cell, 2015, 162, 243-245.	13.5	19
49	Mitosis, Diffusible Crosslinkers, and the Ideal Gas Law. Cell, 2015, 160, 1041-1043.	13.5	11
50	Physical limits on kinesin-5â€“mediated chromosome congression in the smallest mitotic spindles. Molecular Biology of the Cell, 2015, 26, 3999-4014.	0.9	11
51	Abstract A03: A brain cancer cell migration simulator based on a motor-clutch model. , 2015, , .		1
52	Quantitative Analysis of Microtubule Self-assembly Kinetics and Tip Structure. Methods in Enzymology, 2014, 540, 35-52.	0.4	36
53	Minus-End-Directed Kinesin-14 Motors Align Antiparallel Microtubules to Control Metaphase Spindle Length. Developmental Cell, 2014, 31, 61-72.	3.1	71
54	Optimality of Force Transmission in a Motor-Clutch Cellular Adhesion Model. Biophysical Journal, 2014, 106, 243a.	0.2	0

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55	Regulation of Actin Filament Turnover in Brain Tumor Cell Motility. Biophysical Journal, 2014, 106, 359a.	0.2	0
56	Evolving Tip Structures Can Explain Age-Dependent Microtubule Catastrophe. Current Biology, 2013, 23, 1342-1348.	1.8	116
57	BMES Editorial. Cellular and Molecular Bioengineering, 2013, 6, 119-119.	1.0	0
58	Master Equation-Based Analysis of a Motor-Clutch Model for Cell Traction Force. Cellular and Molecular Bioengineering, 2013, 6, 449-459.	1.0	65
59	Brownian Dynamics of Subunit Addition-Loss Kinetics and Thermodynamics in Linear Polymer Self-Assembly. Biophysical Journal, 2013, 105, 2528-2540.	0.2	47
60	Introduction to the Special Issue Dedicated to the Memory of Alan J. Hunt. Cellular and Molecular Bioengineering, 2013, 6, 355-355.	1.0	0
61	A Brief Scientific Biography of Prof. Alan J. Hunt. Cellular and Molecular Bioengineering, 2013, 6, 356-360.	1.0	0
62	Determinants of Maximal Force Transmission in a Motor-Clutch Model of Cell Traction in a Compliant Microenvironment. Biophysical Journal, 2013, 105, 581-592.	0.2	185
63	Estimating the Microtubule GTP Cap Size InÂVivo. Current Biology, 2012, 22, 1681-1687.	1.8	101
64	Science+dance=bodystorming. Trends in Cell Biology, 2012, 22, 613-616.	3.6	6
65	Outstanding Papers in Cellular and Molecular Bioengineering from the 2011 Biomedical Engineering Society Annual Meeting. Cellular and Molecular Bioengineering, 2012, 5, 127-127.	1.0	0
66	Dynein Tethers and Stabilizes Dynamic Microtubule Plus Ends. Current Biology, 2012, 22, 632-637.	1.8	102
67	Kinetics of Microtubule Assembly. Biophysical Journal, 2011, 100, 530a-531a.	0.2	0
68	Getting Cells and Tissues into Shape. Cell, 2011, 144, 325-326.	13.5	14
69	Rapid Microtubule Self-Assembly Kinetics. Cell, 2011, 146, 582-592.	13.5	201
70	Regulation of the MEX-5 Gradient by a Spatially Segregated Kinase/Phosphatase Cycle. Cell, 2011, 146, 955-968.	13.5	122
71	Modeling cellular processes in 3D. Trends in Cell Biology, 2011, 21, 692-700.	3.6	38
72	Microtubule Tip Tracking and Tip Structures at the Nanometer Scale Using Digital Fluorescence Microscopy. Cellular and Molecular Bioengineering, 2011, 4, 192-204.	1.0	55

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73	Assessment of Transport Mechanisms Underlying the Bicoid Morphogen Gradient. Cellular and Molecular Bioengineering, 2011, 4, 116-121.	1.0	24
74	Model Convolution: A Computational Approach to Digital Image Interpretation. Cellular and Molecular Bioengineering, 2010, 3, 163-170.	1.0	32
75	Cell-Length-Dependent Microtubule Accumulation during Polarization. Current Biology, 2010, 20, 979-988.	1.8	55
76	Stochastic simulation and graphic visualization of mitotic processes. Methods, 2010, 51, 251-256.	1.9	8
77	Highly Variable Microtubule Assembly Dynamics Reflect Near-Kilohertz Kinetics: Evidence Against Traditional Linear Growth Theory. Biophysical Journal, 2010, 98, 363a.	0.2	0
78	Anterograde Microtubule Transport Drives Microtubule Bending in LLC-PK1 Epithelial Cells. Molecular Biology of the Cell, 2009, 20, 2943-2953.	0.9	83
79	Outstanding Papers from the 2009 Biomedical Engineering Society (BMES) Annual Meeting. Cellular and Molecular Bioengineering, 2009, 2, 463-463.	1.0	0
80	Modeling of Motor Mediated Microtubule Bending. Biophysical Journal, 2009, 96, 572a.	0.2	0
81	Model for Protein Concentration Gradients in the Cytoplasm. Cellular and Molecular Bioengineering, 2008, 1, 84-92.	1.0	53
82	Cellular and Molecular Bioengineering: Editorial Perspective. Cellular and Molecular Bioengineering, 2008, 1, 4-4.	1.0	1
83	Dam1 complexes go it alone on disassembling microtubules. Nature Cell Biology, 2008, 10, 379-381.	4.6	9
84	Microtubule assembly dynamics: new insights at the nanoscale. Current Opinion in Cell Biology, 2008, 20, 64-70.	2.6	57
85	Kinesin-8 molecular motors: putting the brakes on chromosome oscillations. Trends in Cell Biology, 2008, 18, 307-310.	3.6	55
86	Traction Dynamics of Filopodia on Compliant Substrates. Science, 2008, 322, 1687-1691.	6.0	759
87	Chromosome Congression by Kinesin-5 Motor-Mediated Disassembly of Longer Kinetochore Microtubules. Cell, 2008, 135, 894-906.	13.5	168
88	The microtubule-based motor Kar3 and plus endâ€“binding protein Bim1 provide structural support for the anaphase spindle. Journal of Cell Biology, 2008, 180, 91-100.	2.3	64
89	Analysis of Microtubule Curvature. Methods in Cell Biology, 2007, 83, 237-268.	0.5	40
90	Hypothesis testing via integrated computer modeling and digital fluorescence microscopy. Methods, 2007, 41, 232-237.	1.9	19

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91	Microtubule Assembly Dynamics at the Nanoscale. Current Biology, 2007, 17, 1445-1455.	1.8	159
92	Micropatterning of living cells by laser-guided direct writing: application to fabrication of hepaticâ€“endothelial sinusoid-like structures. Nature Protocols, 2006, 1, 2288-2296.	5.5	117
93	Modeling of chromosome motility during mitosis. Current Opinion in Cell Biology, 2006, 18, 639-647.	2.6	33
94	Mps1 Phosphorylation of Dam1 Couples Kinetochores to Microtubule Plus Ends at Metaphase. Current Biology, 2006, 16, 1489-1501.	1.8	93
95	Potential for Control of Signaling Pathways via Cell Size and Shape. Current Biology, 2006, 16, 1685-1693.	1.8	201
96	Asymmetric Division: Motor Persistence Pays off. Current Biology, 2006, 16, R1021-R1023.	1.8	0
97	Two-step cell patterning on planar and complex curved surfaces by precision spraying of polymers. Biotechnology and Bioengineering, 2006, 93, 919-927.	1.7	44
98	Measuring Nanometer Scale Gradients in Spindle Microtubule Dynamics Using Model Convolution Microscopy. Molecular Biology of the Cell, 2006, 17, 4069-4079.	0.9	40
99	Endothelium-Mediated Hepatocyte Recruitment in the Establishment of Liver-like TissueIn Vitro. Tissue Engineering, 2006, 12, 1627-1638.	4.9	75
100	Chromosome Capture: Take Me to Your Kinetochore. Current Biology, 2005, 15, R328-R330.	1.8	4
101	Mitotic Spindle: Disturbing a Subtle Balance. Current Biology, 2005, 15, R956-R959.	1.8	5
102	Laser-guided direct writing for three-dimensional tissue engineering. Biotechnology and Bioengineering, 2005, 92, 129-136.	1.7	249
103	Robust Micromechanical Neurite Elicitation in Synapse-Competent Neurons Via Magnetic Bead Force Application. Annals of Biomedical Engineering, 2005, 33, 1229-1237.	1.3	16
104	Tension-dependent Regulation of Microtubule Dynamics at Kinetochores Can Explain Metaphase Congression in Yeast. Molecular Biology of the Cell, 2005, 16, 3764-3775.	0.9	124
105	Cell Patterning on Biological Gels via Cell Spraying through a Mask. Tissue Engineering, 2005, 11, 701-708.	4.9	47
106	Mechanochemical Model of Microtubule Structure and Self-Assembly Kinetics. Biophysical Journal, 2005, 89, 2911-2926.	0.2	230
107	Stable Kinetochore-Microtubule Attachment Constrains Centromere Positioning in Metaphase. Current Biology, 2004, 14, 1962-1967.	1.8	144
108	Micro-Patterning of Animal Cells on PDMS Substrates in the Presence of Serum without Use of Adhesion Inhibitors. Biomedical Microdevices, 2004, 6, 219-222.	1.4	79

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109	Dimensionless parameters for the design of optical traps and laser guidance systems. Applied Optics, 2004, 43, 3999.	2.1	47
110	A Micro-tool for Mechanical Manipulation of in vitro Cell Arrays. Biomedical Microdevices, 2003, 5, 291-295.	1.4	8
111	Tensile Force-Dependent Neurite Elicitation via Anti-Î²1 Integrin Antibody-Coated Magnetic Beads. Biophysical Journal, 2003, 85, 623-636.	0.2	102
112	Mechanisms of Microtubule-Based Kinetochore Positioning in the Yeast Metaphase Spindle. Biophysical Journal, 2003, 84, 3529-3546.	0.2	93
113	Estimates of lateral and longitudinal bond energies within the microtubule lattice. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 6035-6040.	3.3	227
114	<title>Nano- and microscale manipulation of biological particles by laser-guided direct writing</title>. , 2002, 4608, 245.		2
115	The Importance of Lattice Defects in Katanin-Mediated Microtubule Severing in Vitro. Biophysical Journal, 2002, 82, 2916-2927.	0.2	75
116	Analysis of radiation forces in laser trapping and laser-guided direct writing applications. IEEE Journal of Quantum Electronics, 2002, 38, 131-141.	1.0	48
117	Rapid dynamics of the microtubule binding of ensconsin in vivo. Journal of Cell Science, 2001, 114, 3885-3897.	1.2	140
118	Stochastic dynamics of the nerve growth cone and its microtubules during neurite outgrowth. , 2000, 50, 452-461.		38
119	Laser-guided direct writing of living cells. Biotechnology and Bioengineering, 2000, 67, 312-318.	1.7	277
120	Laser-guided direct writing of living cells. , 2000, 67, 312.		1
121	Laser-guided direct writing of living cells. Biotechnology and Bioengineering, 2000, 67, 312.	1.7	12
122	Laser-guided direct writing for applications in biotechnology. Trends in Biotechnology, 1999, 17, 385-389.	4.9	258
123	Diffusion inside microtubules. European Biophysics Journal, 1998, 27, 514-520.	1.2	39
124	Autocorrelation Function and Power Spectrum of Two-State Random Processes Used in Neurite Guidance. Biophysical Journal, 1998, 75, 1189-1196.	0.2	29
125	Estimation of the diffusion-limited rate of microtubule assembly. Biophysical Journal, 1997, 73, 88-96.	0.2	54
126	Time series characterization of simulated microtubule dynamics in the nerve growth cone. Annals of Biomedical Engineering, 1995, 23, 268-286.	1.3	23

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127	Kinetics of microtubule catastrophe assessed by probabilistic analysis. Biophysical Journal, 1995, 69, 796-802.	0.2	120
128	Immunoaffinity purification: Basic principles and operational considerations. Biotechnology Advances, 1992, 10, 413-446.	6.0	39
129	A microtool for in vitro cell array manipulation. , 0, , .		1
130	Microtubule Bending and Breaking in Cellular Mechanotransduction. , 0, , 234-249.		0