Khalid Salaita

List of Publications by Year
in descending order

91 papers	5,555 citations	94381 37 h-index	85498 71 g-index
98 all docs	98 docs citations	98 times ranked	6071 citing authors

#	Article	IF	Citations
1	Applications of dip-pen nanolithography. Nature Nanotechnology, 2007, 2, 145-155.	15.6	801
2	Restriction of Receptor Movement Alters Cellular Response: Physical Force Sensing by EphA2. Science, 2010, 327, 1380-1385.	6.0	301
3	Massively Parallel Dipâ€"Pen Nanolithography with 55â€‰000-Pen Two-Dimensional Arrays. Angewandte Chemie - International Edition, 2006, 45, 7220-7223.	7.2	289
4	DNA-based digital tension probes reveal integrin forces during early cell adhesion. Nature Communications, 2014, 5, 5167.	5.8	258
5	DNA-based nanoparticle tension sensors reveal that T-cell receptors transmit defined pN forces to their antigens for enhanced fidelity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5610-5615.	3.3	256
6	High-speed DNA-based rolling motors powered by RNase H. Nature Nanotechnology, 2016, 11, 184-190.	15.6	178
7	Platelet integrins exhibit anisotropic mechanosensing and harness piconewton forces to mediate platelet aggregation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 325-330.	3.3	134
8	Molecular Tension Probes for Imaging Forces at the Cell Surface. Accounts of Chemical Research, 2017, 50, 2915-2924.	7.6	127
9	Structurally Defined Nanoscale Sheets from Self-Assembly of Collagen-Mimetic Peptides. Journal of the American Chemical Society, 2014, 136, 4300-4308.	6.6	126
10	Nanoparticle Tension Probes Patterned at the Nanoscale: Impact of Integrin Clustering on Force Transmission. Nano Letters, 2014, 14, 5539-5546.	4.5	124
11	Sub-100â€...nm, Centimeter-Scale, Parallel Dip-Pen Nanolithography. Small, 2005, 1, 940-945.	5.2	122
12	Tension Sensing Nanoparticles for Mechano-Imaging at the Living/Nonliving Interface. Journal of the American Chemical Society, 2013, 135, 5320-5323.	6.6	118
13	Nanoscale optomechanical actuators for controlling mechanotransduction in living cells. Nature Methods, 2016, 13, 143-146.	9.0	113
14	A TCR mechanotransduction signaling loop induces negative selection in the thymus. Nature Immunology, 2018, 19, 1379-1390.	7.0	112
15	Mapping the 3D orientation of piconewton integrin traction forces. Nature Methods, 2018, 15, 115-118.	9.0	105
16	Knockdown of TNF-Î± by DNAzyme gold nanoparticles as an anti-inflammatory therapy for myocardial infarction. Biomaterials, 2016, 83, 12-22.	5.7	100
17	Programmable Multivalent DNA-Origami Tension Probes for Reporting Cellular Traction Forces. Nano Letters, 2018, 18, 4803-4811.	4.5	97
18	DNA probes that store mechanical information reveal transient piconewton forces applied by T cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 16949-16954.	3.3	96

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19	Using patterned supported lipid membranes to investigate the role of receptor organization in intercellular signaling. Nature Protocols, 2011, 6, 523-539.	5.5	86
20	Catalytic Deoxyribozyme-Modified Nanoparticles for RNAi-Independent Gene Regulation. ACS Nano, 2012, 6, 9150-9157.	7.3	86
21	Live-cell super-resolved PAINT imaging of piconewton cellular traction forces. Nature Methods, 2020, 17, 1018-1024.	9.0	85
22	Chameleon-Inspired Strain-Accommodating Smart Skin. ACS Nano, 2019, 13, 9918-9926.	7.3	80
23	Titin-Based Nanoparticle Tension Sensors Map High-Magnitude Integrin Forces within Focal Adhesions. Nano Letters, 2016, 16, 341-348.	4.5	79
24	l-Ala-Î³-d-Glu-meso-diaminopimelic Acid (DAP) Interacts Directly with Leucine-rich Region Domain of Nucleotide-binding Oligomerization Domain 1, Increasing Phosphorylation Activity of Receptor-interacting Serine/Threonine-protein Kinase 2 and Its Interaction with Nucleotide-binding Oligomerization Domain 1. Journal of Biological Chemistry, 2011, 286, 31003-31013.	1.6	77
25	Supported lipid bilayer platforms to probe cell mechanobiology. Biochimica Et Biophysica Acta - Biomembranes, 2017, 1859, 1465-1482.	1.4	70
26	DNA mechanotechnology reveals that integrin receptors apply pN forces in podosomes on fluid substrates. Nature Communications, 2019, 10, 4507.	5.8	69
27	Emerging uses of DNA mechanical devices. Science, 2019, 365, 1080-1081.	6.0	67
28	DNA Nanotechnology as an Emerging Tool to Study Mechanotransduction in Living Systems. Small, 2019, 15, e1900961.	5.2	67
29	Ratiometric Tension Probes for Mapping Receptor Forces and Clustering at Intermembrane Junctions. Nano Letters, 2016, 16, 4552-4559.	4.5	65
30	Spontaneous â€œPhase Separationâ€• of Patterned Binary Alkanethiol Mixtures. Journal of the American Chemical Society, 2005, 127, 11283-11287.	6.6	51
31	The modulation of cardiac progenitor cell function by hydrogel-dependent Notch1 activation. Biomaterials, 2014, 35, 8103-8112.	5.7	49
32	Programmable Mechanically Active Hydrogelâ€Based Materials. Advanced Materials, 2021, 33, e2006600.	11.1	46
33	Tunable DNA Origami Motors Translocate Ballistically Over Î¼m Distances at nm/s Speeds. Angewandte Chemie - International Edition, 2020, 59, 9514-9521.	7.2	45
34	Super-Resolution Fluorescence Imaging Reveals That Serine Incorporator Protein 5 Inhibits Human Immunodeficiency Virus Fusion by Disrupting Envelope Glycoprotein Clusters. ACS Nano, 2020, 14, 10929-10943.	7.3	45
35	A General Approach for Generating Fluorescent Probes to Visualize Piconewton Forces at the Cell Surface. Journal of the American Chemical Society, 2016, 138, 2901-2904.	6.6	44
36	Seeded Heteroepitaxial Growth of Crystallizable Collagen Triple Helices: Engineering Multifunctional Two-Dimensional Coreâ€"Shell Nanostructures. Journal of the American Chemical Society, 2019, 141, 20107-20117.	6.6	42

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37	Highly Polyvalent DNA Motors Generate 100+ pN of Force via Autochemophoresis. Nano Letters, 2019, 19, 6977-6986.	4.5	41
38	2D Crystal Engineering of Nanosheets Assembled from Helical Peptide Building Blocks. Angewandte Chemie - International Edition, 2019, 58, 13507-13512.	7.2	39
39	Membrane Tethered Delta Activates Notch and Reveals a Role for Spatio-Mechanical Regulation of the Signaling Pathway. Biophysical Journal, 2013, 105, 2655-2665.	0.2	38
40	Mechanically Induced Catalytic Amplification Reaction for Readout of Receptorâ€Mediated Cellular Forces. Angewandte Chemie - International Edition, 2016, 55, 5488-5492.	7.2	36
41	EGFR activation attenuates the mechanical threshold for integrin tension and focal adhesion formation. Journal of Cell Science, 2020, 133, .	1.2	36
42	The magnitude of LFA-1/ICAM-1 forces fine-tune TCR-triggered T cell activation. Science Advances, 2022, 8, eabg4485.	4.7	36
43	Forces during cellular uptake of viruses and nanoparticles at the ventral side. Nature Communications, 2020, 11, 32.	5.8	35
44	Mechanically Triggered Hybridization Chain Reaction. Angewandte Chemie - International Edition, 2021, 60, 19974-19981.	7.2	34
45	Electrochemical Whittling of Organic Nanostructures. Nano Letters, 2002, 2, 1389-1392.	4.5	33
46	Macrophages exposed to HIV viral protein disrupt lung epithelial cell integrity and mitochondrial bioenergetics via exosomal microRNA shuttling. Cell Death and Disease, 2019, 10, 580.	2.7	32
47	Localized Nanoscale Heating Leads to Ultrafast Hydrogel Volume-Phase Transition. ACS Nano, 2019, 13, 515-525.	7.3	28
48	DNA Gold Nanoparticle Motors Demonstrate Processive Motion with Bursts of Speed Up to 50 nm Per Second. ACS Nano, 2021, 15, 8427-8438.	7.3	28
49	Shape-Shifting Peptide Nanomaterials: Surface Asymmetry Enables pH-Dependent Formation and Interconversion of Collagen Tubes and Sheets. Journal of the American Chemical Society, 2020, 142, 19956-19968.	6.6	27
50	Mechanically active integrins target lytic secretion at the immune synapse to facilitate cellular cytotoxicity. Nature Communications, 2022, 13, .	5.8	27
51	<i>SmartMat</i>: Smart materials to Smart world. SmartMat, 2020, 1, .	6.4	25
52	Mechanical Stimulation of Adhesion Receptors Using Light-Responsive Nanoparticle Actuators Enhances Myogenesis. ACS Applied Materials & Interfaces, 2020, 12, 35903-35917.	4.0	24
53	Real-time fluorescence imaging with 20â€‰nm axial resolution. Nature Communications, 2015, 6, 8307.	5.8	20
54	Site-Selective RNA Splicing Nanozyme: DNAzyme and RtcB Conjugates on a Gold Nanoparticle. ACS Chemical Biology, 2018, 13, 215-224.	1.6	18

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55	Mechanical Proofreading: A General Mechanism to Enhance the Fidelity of Information Transfer Between Cells. Frontiers in Physics, 2019, 7, .	1.0	18
56	Molecular Tension Probes to Investigate the Mechanopharmacology of Single Cells: A Step toward Personalized Mechanomedicine. Advanced Healthcare Materials, 2018, 7, e1800069.	3.9	17
57	ST6Gal-Iâ€“mediated sialylation of the epidermal growth factor receptor modulates cell mechanics and enhances invasion. Journal of Biological Chemistry, 2022, 298, 101726.	1.6	17
58	Chemical-to-mechanical molecular computation using DNA-based motors with onboard logic. Nature Nanotechnology, 2022, 17, 514-523.	15.6	17
59	Imaging vesicle formation dynamics supports the flexible model of clathrin-mediated endocytosis. Nature Communications, 2022, 13, 1732.	5.8	17
60	Light-Responsive Polymer Particles as Force Clamps for the Mechanical Unfolding of Target Molecules. Nano Letters, 2018, 18, 2630-2636.	4.5	16
61	Smart Nucleic Acids as Future Therapeutics. Trends in Biotechnology, 2021, 39, 1289-1307.	4.9	15
62	Carfilzomib Treatment Causes Molecular and Functional Alterations of Human Induced Pluripotent Stem Cellâ€“Derived Cardiomyocytes. Journal of the American Heart Association, 2021, 10, e022247.	1.6	15
63	DNAâ€Based Microparticle Tension Sensors (Î¼TS) for Measuring Cell Mechanics in Nonâ€planar Geometries and for Highâ€Throughput Quantification. Angewandte Chemie - International Edition, 2021, 60, 18044-18050.	7.2	13
64	Variable incidence angle linear dichroism (VALiD): a technique for unique 3D orientation measurement of fluorescent ensembles. Optics Express, 2020, 28, 10039.	1.7	12
65	Roles of the cytoskeleton in regulating EphA2 signals. Communicative and Integrative Biology, 2010, 3, 454-457.	0.6	11
66	2D Crystal Engineering of Nanosheets Assembled from Helical Peptide Building Blocks. Angewandte Chemie, 2019, 131, 13641-13646.	1.6	11
67	Multivalent molecular tension probes as anisotropic mechanosensors: concept and simulation. Physical Biology, 2021, 18, 034001.	0.8	11
68	Supramolecular DNA Photonic Hydrogels for On-Demand Control of Coloration with High Spatial and Temporal Resolution. Nano Letters, 2021, 21, 9958-9965.	4.5	11
69	Conditional Deoxyribozymeâ€“Nanoparticle Conjugates for miRNA-Triggered Gene Regulation. ACS Applied Materials & Interfaces, 2020, 12, 37851-37861.	4.0	10
70	Turn-key mapping of cell receptor force orientation and magnitude using a commercial structured illumination microscope. Nature Communications, 2021, 12, 4693.	5.8	10
71	The effects of organic vapor on alkanethiol deposition via Dipâ€pen nanolithography. Scanning, 2010, 32, 9-14.	0.7	9
72	Engineering DNA-Functionalized Nanostructures to Bind Nucleic Acid Targets Heteromultivalently with Enhanced Avidity. Journal of the American Chemical Society, 2020, 142, 9653-9660.	6.6	9

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73	DNA Tension Probes Show that Cardiomyocyte Maturation Is Sensitive to the Piconewton Traction Forces Transmitted by Integrins. ACS Nano, 2022, 16, 5335-5348.	7.3	9
74	Mechanically Induced Catalytic Amplification Reaction for Readout of Receptorâ€Mediated Cellular Forces. Angewandte Chemie, 2016, 128, 5578-5582.	1.6	8
75	Spectroscopic Analysis of a Library of DNA Tension Probes for Mapping Cellular Forces at Fluid Interfaces. ACS Applied Materials & Interfaces, 2021, 13, 2145-2164.	4.0	8
76	Conditional Antisense Oligonucleotides Triggered by miRNA. ACS Chemical Biology, 2021, 16, 2255-2267.	1.6	8
77	Tunable DNA Origami Motors Translocate Ballistically Over Î¼m Distances at nm/s Speeds. Angewandte Chemie, 2020, 132, 9601-9608.	1.6	7
78	An Outside-In Switch in Integrin Signaling Caused by Chemical and Mechanical Signals in Reactive Astrocytes. Frontiers in Cell and Developmental Biology, 2021, 9, 712627.	1.8	7
79	The Molecular Boat: A Hands-On Experiment To Demonstrate the Forces Applied to Self-Assembled Monolayers at Interfaces. Journal of Chemical Education, 2012, 89, 1547-1550.	1.1	6
80	Optical Control of Cytokine Signaling via Bioinspired, Polymer-Induced Latency. Biomacromolecules, 2020, 21, 2635-2644.	2.6	6
81	DNA Tension Probes to Map the Transient Piconewton Receptor Forces by Immune Cells. Journal of Visualized Experiments, 2021, , .	0.2	6
82	DNAâ€Based Microparticle Tension Sensors (Î¼TS) for Measuring Cell Mechanics in Nonâ€planar Geometries and for Highâ€Throughput Quantification. Angewandte Chemie, 2021, 133, 18192-18198.	1.6	6
83	Massively Parallelized Molecular Force Manipulation with On-Demand Thermal and Optical Control. Journal of the American Chemical Society, 2021, 143, 19466-19473.	6.6	6
84	A brighter force gauge for cells. ELife, 2018, 7, .	2.8	4
85	Gene Regulation Using Nanodiscs Modified with HIF-1-Î± Antisense Oligonucleotides. Bioconjugate Chemistry, 2022, 33, 279-293.	1.8	4
86	Mechanically Triggered Hybridization Chain Reaction. Angewandte Chemie, 2021, 133, 20127-20134.	1.6	3
87	Cover Picture: Massively Parallel Dipâ€“Pen Nanolithography with 55â€‰000-Pen Two-Dimensional Arrays (Angew. Chem. Int. Ed. 43/2006). Angewandte Chemie - International Edition, 2006, 45, 7099-7099.	7.2	2
88	Applications of dip-pen nanolithography. , 2009, , 297-307.		2
89	Bionanoarrays. , 0, , 233-259.		1
90	Location, Location, Location: EphB4:Ephrin-B2 Signaling Depends on Its Spatial Arrangement. Biophysical Journal, 2018, 115, 754-756.	0.2	0

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91	Fluorescence Polarization Microscopy Enables Spatial Mapping of the 3D Orientation of Piconewton Integrin Traction Forces. Microscopy and Microanalysis, 2019, 25, 1244-1245.	0.2	0