Deborah E Leckband

List of Publications by Year
in descending order

63 papers	3,512 citations	201674 27 h-index	144013 57 g-index
67 all docs	67 docs citations	67 times ranked	4389 citing authors

#	Article	IF	Citations
1	Vinculin potentiates E-cadherin mechanosensing and is recruited to actin-anchored sites within adherens junctions in a myosin IIâ€“dependent manner. Journal of Cell Biology, 2010, 189, 1107-1115.	5.2	569
2	Tissue Organization by Cadherin Adhesion Molecules: Dynamic Molecular and Cellular Mechanisms of Morphogenetic Regulation. Physiological Reviews, 2011, 91, 691-731.	28.8	349
3	Evaluation of a Three-Dimensional Micromixer in a Surface-Based Biosensorâ€. Langmuir, 2003, 19, 1824-1828.	3.5	149
4	Synthesis and functionalization of polypyrrole-Fe3O4 nanoparticles for applications in biomedicine. Journal of Materials Chemistry, 2007, 17, 3354.	6.7	145
5	Mechanotransduction at cadherin-mediated adhesions. Current Opinion in Cell Biology, 2011, 23, 523-530.	5.4	142
6	Dynamic Visualization of Î±-Catenin Reveals Rapid, Reversible Conformation Switching between Tension States. Current Biology, 2015, 25, 218-224.	3.9	141
7	Protein Adsorption on Poly(N-isopropylacrylamide) Brushes: Dependence on Grafting Density and Chain Collapse. Langmuir, 2011, 27, 8810-8818.	3.5	134
8	Î±-Catenin cytomechanics â€“ role in cadherin-dependent adhesion and mechanotransduction. Journal of Cell Science, 2014, 127, 1779-1791.	2.0	107
9	Measurements of Interbilayer Forces and Protein Adsorption on Uncharged Lipid Bilayers Displaying Poly(ethylene glycol) Chainsâ€. Biochemistry, 2000, 39, 3441-3451.	2.5	103
10	Local VE-cadherin mechanotransduction triggers long-ranged remodeling of endothelial monolayers. Journal of Cell Science, 2015, 128, 1341-1351.	2.0	103
11	Vinculin-dependent Cadherin mechanosensing regulates efficient epithelial barrier formation. Biology Open, 2012, 1, 1128-1140.	1.2	102
12	A Computational Reactionâ^'Diffusion Model for the Analysis of Transport-Limited Kinetics. Analytical Chemistry, 1999, 71, 5405-5412.	6.5	97
13	Force-dependent allostery of the Î±-catenin actin-binding domain controls adherens junction dynamics and functions. Nature Communications, 2018, 9, 5121.	12.8	86
14	Protein Adsorption Modes Determine Reversible Cell Attachment on Poly(Nâ€isopropyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 22	14.9	76
15	Substrate stiffness and VE-cadherin mechano-transduction coordinate to regulate endothelial monolayer integrity. Biomaterials, 2017, 140, 45-57.	11.4	71
16	Cadherin recognition and adhesion. Current Opinion in Cell Biology, 2012, 24, 620-627.	5.4	67
17	E-Cadherin-mediated force transduction signals regulate global cell mechanics. Journal of Cell Science, 2016, 129, 1843-54.	2.0	66
18	Two Stage Cadherin Kinetics Require Multiple Extracellular Domains but Not the Cytoplasmic Region. Journal of Biological Chemistry, 2008, 283, 1848-1856.	3.4	52

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19	N-cadherin regulates spatially polarized signals through distinct p120ctn and Î²-catenin-dependent signalling pathways. Nature Communications, 2013, 4, 1589.	12.8	52
20	N-cadherin signaling via Trio assembles adherens junctions to restrict endothelial permeability. Journal of Cell Biology, 2019, 218, 299-316.	5.2	49
21	Cadherin-dependent mechanotransduction depends on ligand identity but not affinity. Journal of Cell Science, 2012, 125, 4362-71.	2.0	48
22	Protein Adsorption Mechanisms Determine the Efficiency of Thermally Controlled Cell Adhesion on Poly(N-isopropyl acrylamide) Brushes. Biomacromolecules, 2013, 14, 92-100.	5.4	48
23	Constructing modular and universal single molecule tension sensor using protein G to study mechano-sensitive receptors. Scientific Reports, 2016, 6, 21584.	3.3	44
24	Î±-catenin phosphorylation promotes intercellular adhesion through a dual-kinase mechanism. Journal of Cell Science, 2015, 128, 1150-65.	2.0	43
25	Allosteric Regulation of E-Cadherin Adhesion. Journal of Biological Chemistry, 2015, 290, 21749-21761.	3.4	41
26	VE-PTP stabilizes VE-cadherin junctions and the endothelial barrier via a phosphatase-independent mechanism. Journal of Cell Biology, 2019, 218, 1725-1742.	5.2	40
27	Direct Imaging of Protein Stability and Folding Kinetics in Hydrogels. ACS Applied Materials & Interfaces, 2017, 9, 21606-21617.	8.0	36
28	Cadherin clusters stabilized by a combination of specific and nonspecific cis-interactions. ELife, 2020, 9, .	6.0	33
29	Structural Determinants of the Mechanical Stability of Î±-Catenin. Journal of Biological Chemistry, 2015, 290, 18890-18903.	3.4	31
30	Protein Adsorption on Grafted Zwitterionic Polymers Depends on Chain Density and Molecular Weight. Advanced Functional Materials, 2020, 30, 2000757.	14.9	26
31	Beyond structure: mechanism and dynamics of intercellular adhesion. Biochemical Society Transactions, 2008, 36, 213-220.	3.4	24
32	Cadherin cis and trans interactions are mutually cooperative. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	24
33	Cadherin Extracellular Domain Clustering in the Absence of Trans-Interactions. Journal of Physical Chemistry Letters, 2019, 10, 4528-4534.	4.6	23
34	Mechanical disruption of E-cadherin complexes with epidermal growth factor receptor actuates growth factorâ€“dependent signaling. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	23
35	A Computational Model for Kinetic Studies of Cadherin Binding and Clustering. Biophysical Journal, 2016, 111, 1507-1518.	0.5	22
36	P120 catenin potentiates constitutive E-cadherin dimerization at the plasma membrane and regulates trans binding. Current Biology, 2021, 31, 3017-3027.e7.	3.9	22

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37	Salt bridges gate Î±-catenin activation at intercellular junctions. Molecular Biology of the Cell, 2018, 29, 111-122.	2.1	21
38	Soluble Zwitterionic Poly(sulfobetaine) Destabilizes Proteins. Biomacromolecules, 2018, 19, 3894-3901.	5.4	21
39	Comparative effects of N-cadherin protein and peptide fragments on mesenchymal stem cell mechanotransduction and paracrine function. Biomaterials, 2020, 239, 119846.	11.4	20
40	Measuring Traction Forces in Long-Term Cell Cultures. Cellular and Molecular Bioengineering, 2010, 3, 40-49.	2.1	19
41	Cadherin Point Mutations Alter Cell Sorting and Modulate GTPase Signaling. Journal of Cell Science, 2012, 125, 3299-309.	2.0	19
42	Epidermal growth factor receptor and integrins control force-dependent vinculin recruitment to E-Cadherin junctions. Journal of Cell Science, 2018, 131, .	2.0	19
43	Nanomechanics of adhesion proteins. Current Opinion in Structural Biology, 2004, 14, 524-530.	5.7	17
44	Polypyrrole Nanospheres with Magnetic and Cell-Targeting Capabilities. Macromolecular Rapid Communications, 2007, 28, 816-821.	3.9	16
45	Cadherin Diffusion in Supported Lipid Bilayers Exhibits Calcium-Dependent Dynamic Heterogeneity. Biophysical Journal, 2016, 111, 2658-2665.	0.5	16
46	Dynamic Imaging Reveals Coordinate Effects of Cyclic Stretch and Substrate Stiffness on Endothelial Integrity. Annals of Biomedical Engineering, 2016, 44, 3655-3667.	2.5	16
47	Graphene oxide substrates with N-cadherin stimulates neuronal growth and intracellular transport. Acta Biomaterialia, 2019, 90, 412-423.	8.3	16
48	Biophysics of Cadherin Adhesion. Sub-Cellular Biochemistry, 2012, 60, 63-88.	2.4	14
49	A genetic variant of cortactin linked to acute lung injury impairs lamellipodia dynamics and endothelial wound healing. American Journal of Physiology - Lung Cellular and Molecular Physiology, 2015, 309, L983-L994.	2.9	14
50	Kinetic Measurements Reveal Enhanced Protein-Protein Interactions at Intercellular Junctions. Scientific Reports, 2016, 6, 23623.	3.3	14
51	Variably Elastic Hydrogel Patterned via Capillary Action in Microchannels. Langmuir, 2007, 23, 1483-1488.	3.5	13
52	Geometry and Adhesion of Extracellular Domains of DC-SIGNR Neck Length Variants Analyzed by Forceâ€“Distance Measurements. Biochemistry, 2011, 50, 6125-6132.	2.5	13
53	Design Rules for Biomolecular Adhesion: Lessons from Force Measurements. Annual Review of Chemical and Biomolecular Engineering, 2010, 1, 365-389.	6.8	11
54	The Structure of the C-Cadherin Ectodomain Resolved. Structure, 2002, 10, 739-740.	3.3	9

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55	Gold nanoparticles disrupt actin organization and pulmonary endothelial barriers. Scientific Reports, 2020, 10, 13320.	3.3	8
56	From Single Molecules to Living Cells: Nanomechanical Measurements of Cell Adhesion. Cellular and Molecular Bioengineering, 2008, 1, 312-326.	2.1	6
57	Stabilization and Kinetics of an Adsorbed Protein Depends on the Poly(N-isopropylacrylamide) Grafting Density. Biomacromolecules, 2021, 22, 4470-4478.	5.4	5
58	Novel Functions and Binding Mechanisms of Carbohydrate-Binding Proteins Determined by Force Measurements. Current Protein and Peptide Science, 2011, 12, 743-759.	1.4	4
59	Ionic strength dependent forces between end-grafted Poly(sulfobetaine) films and mica. Journal of Colloid and Interface Science, 2022, 606, 298-306.	9.4	4
60	Formin' cables under stress. Nature Cell Biology, 2013, 15, 345-346.	10.3	3
61	MOLECULAR MECHANISMS OF CELL ADHESION: NEW PERSPECTIVES FROM SURFACE FORCE MEASUREMENTS. Journal of Adhesion, 2004, 80, 409-432.	3.0	2
62	Forces between mica and end-grafted statistical copolymers of sulfobetaine and oligoethylene glycol in aqueous electrolyte solutions. Journal of Colloid and Interface Science, 2022, 608, 1857-1867.	9.4	2
63	Abstract 337: VE-Cadherin Mechanotransduction Regulates Lung Endothelial Contractility and Barrier Integrity. Arteriosclerosis, Thrombosis, and Vascular Biology, 2014, 34, .	2.4	0