

Douglas B Weibel

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.

103
papers

7,325
citations

41
h-index

85
g-index

104
ext. papers

8,440
ext. citations

8.2
avg, IF

6.18
L-index

#	Paper	IF	Citations
103	Soft Materials that Intercept, Respond to, and Sequester Bacterial Siderophores.. <i>Chemistry of Materials</i> , 2021 , 33, 5401-5412	9.6	1
102	Cardiolipin Alters Cell Shape by Affecting Peptidoglycan Precursor Biosynthesis. <i>MBio</i> , 2019 , 10,	7.8	9
101	Maspin binds to cardiolipin in mitochondria and triggers apoptosis. <i>FASEB Journal</i> , 2019 , 33, 6354-6364	0.9	6
100	Rcs Phosphorelay Activation in Cardiolipin-Deficient Escherichia coli Reduces Biofilm Formation. <i>Journal of Bacteriology</i> , 2019 , 201,	3.5	8
99	Bacterial Swarming Reduces Proteus mirabilis and Vibrio parahaemolyticus Cell Stiffness and Increases β -Lactam Susceptibility. <i>MBio</i> , 2019 , 10,	7.8	8
98	The Oral Bacterium Fusobacterium nucleatum Binds Staphylococcus aureus and Alters Expression of the Staphylococcal Accessory Regulator sarA. <i>Microbial Ecology</i> , 2019 , 78, 336-347	4.4	9
97	Simultaneous 3D cell distribution and bioactivity enhancement of bacterial cellulose (BC) scaffold for articular cartilage tissue engineering. <i>Cellulose</i> , 2019 , 26, 2513-2528	5.5	21
96	The FtsLB subcomplex of the bacterial divisome is a tetramer with an uninterrupted FtsL helix linking the transmembrane and periplasmic regions. <i>Journal of Biological Chemistry</i> , 2018 , 293, 1623-1641	5.4	11
95	Imaging mycobacterial growth and division with a fluorogenic probe. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 5271-5276	11.5	47
94	The outer membrane is an essential load-bearing element in Gram-negative bacteria. <i>Nature</i> , 2018 , 559, 617-621	50.4	216
93	Laboratory Activity Using Accessible Microfluidics to Study Nematode Behavior in an Electrical Field. <i>Journal of Microbiology and Biology Education</i> , 2018 , 19,	1.3	1
92	Studying the Symbiotic Bacterium in Individual, Living Nematodes Using Microfluidic Systems. <i>MSphere</i> , 2018 , 3,	5	6
91	Small Molecule Chelators Reveal That Iron Starvation Inhibits Late Stages of Bacterial Cytokinesis. <i>ACS Chemical Biology</i> , 2018 , 13, 235-246	4.9	8
90	Mechanical Genomic Studies Reveal the Role of d-Alanine Metabolism in Pseudomonas aeruginosa Cell Stiffness. <i>MBio</i> , 2018 , 9,	7.8	13
89	Targeting quinolone- and aminocoumarin-resistant bacteria with new gyramide analogs that inhibit DNA gyrase. <i>MedChemComm</i> , 2017 , 8, 942-951	5	3
88	Detection of ESKAPE Bacterial Pathogens at the Point of Care Using Isothermal DNA-Based Assays in a Portable Degas-Actuated Microfluidic Diagnostic Assay Platform. <i>Applied and Environmental Microbiology</i> , 2017 , 83,	4.8	33
87	Mechanical strain sensing implicated in cell shape recovery in Escherichia coli. <i>Nature Microbiology</i> , 2017 , 2, 17115	26.6	43

86	Exploring Predatory Nematode Chemotaxis Using Low-Cost and Easy-to-Use Microfluidics. <i>American Biology Teacher</i> , 2017 , 79, 753-762	0.3	3
85	Bacterial Cell Mechanics. <i>Biochemistry</i> , 2017 , 56, 3710-3724	3.2	105
84	Ionic Hydrogen Bonds and Lipid Packing Defects Determine the Binding Orientation and Insertion Depth of RecA on Multicomponent Lipid Bilayers. <i>Journal of Physical Chemistry B</i> , 2016 , 120, 8424-37	3.4	17
83	Targeting the Bacterial Division Protein FtsZ. <i>Journal of Medicinal Chemistry</i> , 2016 , 59, 6975-98	8.3	73
82	Direct Correlation between Motile Behavior and Protein Abundance in Single Cells. <i>PLoS Computational Biology</i> , 2016 , 12, e1005041	5	44
81	Straining soft colloids in aqueous nematic liquid crystals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 5564-9	11.5	11
80	Organization and function of anionic phospholipids in bacteria. <i>Applied Microbiology and Biotechnology</i> , 2016 , 100, 4255-67	5.7	64
79	5-Alkyloxytryptamines are membrane-targeting, broad-spectrum antibiotics. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2016 , 26, 5539-5544	2.9	2
78	Mechanical Genomics Identifies Diverse Modulators of Bacterial Cell Stiffness. <i>Cell Systems</i> , 2016 , 2, 402-416	11.6	36
77	Enabling the Development and Deployment of Next Generation Point-of-Care Diagnostics. <i>PLoS Neglected Tropical Diseases</i> , 2015 , 9, e0003676	4.8	41
76	Effects of confinement, surface-induced orientations and strain on dynamical behaviors of bacteria in thin liquid crystalline films. <i>Soft Matter</i> , 2015 , 11, 6821-31	3.6	35
75	Field-Applicable Recombinase Polymerase Amplification Assay for Rapid Detection of <i>Mycoplasma capricolum</i> subsp. <i>capripneumoniae</i> . <i>Journal of Clinical Microbiology</i> , 2015 , 53, 2810-5	9.7	35
74	Membrane-Targeting DCAP Analogues with Broad-Spectrum Antibiotic Activity against Pathogenic Bacteria. <i>ACS Medicinal Chemistry Letters</i> , 2015 , 6, 466-71	4.3	9
73	Anionic Phospholipids Stabilize RecA Filament Bundles in <i>Escherichia coli</i> . <i>Molecular Cell</i> , 2015 , 60, 374-384	11.6	36
72	A Cardiolipin-Deficient Mutant of <i>Rhodobacter sphaeroides</i> Has an Altered Cell Shape and Is Impaired in Biofilm Formation. <i>Journal of Bacteriology</i> , 2015 , 197, 3446-55	3.5	17
71	Bacterial transport of colloids in liquid crystalline environments. <i>Soft Matter</i> , 2015 , 11, 8404-8	3.6	39
70	Agarose particle-templated porous bacterial cellulose and its application in cartilage growth in vitro. <i>Acta Biomaterialia</i> , 2015 , 12, 129-138	10.8	68
69	Decoding the Chemical Language of Motile Bacteria by Using High-Throughput Microfluidic Assays. <i>ChemBioChem</i> , 2015 , 16, 2151-5	3.8	3

68	Spatial Structure of Microbes in Nature and the Biophysics of Cell-Cell Communication 2015 , 53-81		2
67	Polar localization of Escherichia coli chemoreceptors requires an intact Tol-Pal complex. <i>Molecular Microbiology</i> , 2014 , 92, 985-1004	4.1	40
66	Dynamic self-assembly of motile bacteria in liquid crystals. <i>Soft Matter</i> , 2014 , 10, 88-95	3.6	92
65	Microfluidics for High School Chemistry Students. <i>Journal of Chemical Education</i> , 2014 , 91, 112-115	2.4	30
64	Using liquid crystals to reveal how mechanical anisotropy changes interfacial behaviors of motile bacteria. <i>Biophysical Journal</i> , 2014 , 107, 255-65	2.9	50
63	Gyramides prevent bacterial growth by inhibiting DNA gyrase and altering chromosome topology. <i>ACS Chemical Biology</i> , 2014 , 9, 1312-9	4.9	18
62	Localization of anionic phospholipids in Escherichia coli cells. <i>Journal of Bacteriology</i> , 2014 , 196, 3386-98	3.5	103
61	Bacterial cellulose as a substrate for microbial cell culture. <i>Applied and Environmental Microbiology</i> , 2014 , 80, 1926-32	4.8	20
60	Structure-activity studies of divin: an inhibitor of bacterial cell division. <i>ACS Medicinal Chemistry Letters</i> , 2013 , 4, 880-885	4.3	10
59	Bacterial Growth and Adaptation in Microdroplet Chemostats. <i>Angewandte Chemie</i> , 2013 , 125, 9076-9079	3.6	16
58	Inhibitors of bacterial tubulin target bacterial membranes. <i>MedChemComm</i> , 2013 , 4, 112-119	5	37
57	Bacteria-surface interactions. <i>Soft Matter</i> , 2013 , 9, 4368-4380	3.6	381
56	Divin: a small molecule inhibitor of bacterial divisome assembly. <i>Journal of the American Chemical Society</i> , 2013 , 135, 9768-76	16.4	13
55	A chemist building paths to cell biology. <i>Molecular Biology of the Cell</i> , 2013 , 24, 3264-6	3.5	
54	Flagellum density regulates Proteus mirabilis swarmer cell motility in viscous environments. <i>Journal of Bacteriology</i> , 2013 , 195, 368-77	3.5	49
53	R&Ktitelbild: Bacterial Growth and Adaptation in Microdroplet Chemostats (Angew. Chem. 34/2013). <i>Angewandte Chemie</i> , 2013 , 125, 9220-9220	3.6	
52	Studying biomolecule localization by engineering bacterial cell wall curvature. <i>PLoS ONE</i> , 2013 , 8, e84143	3.7	31
51	Measuring the stiffness of bacterial cells from growth rates in hydrogels of tunable elasticity. <i>Molecular Microbiology</i> , 2012 , 84, 874-91	4.1	146

50	A self-loading microfluidic device for determining the minimum inhibitory concentration of antibiotics. <i>Lab on A Chip</i> , 2012 , 12, 1052-9	7.2	110
49	Rapid screening of antibiotic toxicity in an automated microdroplet system. <i>Lab on A Chip</i> , 2012 , 12, 1629-37	175	
48	Characterization of Caulobacter crescentus FtsZ protein using dynamic light scattering. <i>Journal of Biological Chemistry</i> , 2012 , 287, 23878-86	5.4	21
47	The Synthesis and Antimicrobial Activity of Heterocyclic Derivatives of Totarol. <i>ACS Medicinal Chemistry Letters</i> , 2012 , 3, 818-822	4.3	16
46	DCAP: a broad-spectrum antibiotic that targets the cytoplasmic membrane of bacteria. <i>Journal of the American Chemical Society</i> , 2012 , 134, 11322-5	16.4	40
45	MinD and MinE interact with anionic phospholipids and regulate division plane formation in Escherichia coli. <i>Journal of Biological Chemistry</i> , 2012 , 287, 38835-44	5.4	64
44	Rapid identification of ESKAPE bacterial strains using an autonomous microfluidic device. <i>PLoS ONE</i> , 2012 , 7, e41245	3.7	17
43	Quorum sensing between Pseudomonas aeruginosa biofilms accelerates cell growth. <i>Journal of the American Chemical Society</i> , 2011 , 133, 5966-75	16.4	64
42	Chemical-biological studies of subcellular organization in bacteria. <i>Biochemistry</i> , 2011 , 50, 7719-34	3.2	45
41	N-Benzyl-3-sulfonamidopyrrolidines are a New Class of Bacterial DNA Gyrase Inhibitors. <i>ACS Medicinal Chemistry Letters</i> , 2011 , 2, 289-292	4.3	19
40	Encapsulating bacteria in agarose microparticles using microfluidics for high-throughput cell analysis and isolation. <i>ACS Chemical Biology</i> , 2011 , 6, 260-6	4.9	134
39	Cardiolipin microdomains localize to negatively curved regions of Escherichia coli membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 6264-9	11.5	259
38	Physicochemical regulation of biofilm formation. <i>MRS Bulletin</i> , 2011 , 36, 347-355	3.2	352
37	Oligochlorophens are potent inhibitors of Bacillus anthracis. <i>Antimicrobial Agents and Chemotherapy</i> , 2010 , 54, 3988-90	5.9	6
36	Studying the dynamics of flagella in multicellular communities of Escherichia coli by using biarsenical dyes. <i>Applied and Environmental Microbiology</i> , 2010 , 76, 1241-50	4.8	50
35	Propulsion of flexible polymer structures in a rotating magnetic field. <i>Journal of Physics Condensed Matter</i> , 2009 , 21, 204110	1.8	51
34	Bacterial cell curvature through mechanical control of cell growth. <i>EMBO Journal</i> , 2009 , 28, 1208-19	13	132
33	Fabrication of microbial biofilm arrays by geometric control of cell adhesion. <i>Langmuir</i> , 2009 , 25, 4643-54	39	

32	Dissecting microbiological systems using materials science. <i>Trends in Microbiology</i> , 2009 , 17, 100-8	12.4	10
31	Bacterial Swarming: A Model System for Studying Dynamic Self-assembly. <i>Soft Matter</i> , 2009 , 5, 1174-1187	6	209
30	Carbonic anhydrase as a model for biophysical and physical-organic studies of proteins and protein-ligand binding. <i>Chemical Reviews</i> , 2008 , 108, 946-1051	68.1	541
29	Building communities one bacterium at a time. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008 , 105, 18075-6	11.5	17
28	Pumping fluids in microfluidic systems using the elastic deformation of poly(dimethylsiloxane). <i>Lab on A Chip</i> , 2007 , 7, 1832-6	7.2	42
27	Microfabrication meets microbiology. <i>Nature Reviews Microbiology</i> , 2007 , 5, 209-18	22.2	596
26	Reconstitution of DNA segregation driven by assembly of a prokaryotic actin homolog. <i>Science</i> , 2007 , 315, 1270-4	33.3	174
25	Cofabrication of Electromagnets and Microfluidic Systems in Poly(dimethylsiloxane). <i>Angewandte Chemie</i> , 2006 , 118, 7031-7036	3.6	35
24	Pinoresinol: A lignol of plant origin serving for defense in a caterpillar. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006 , 103, 15497-501	11.5	62
23	Applications of microfluidics in chemical biology. <i>Current Opinion in Chemical Biology</i> , 2006 , 10, 584-91	9.7	323
22	Bacterial printing press that regenerates its ink: contact-printing bacteria using hydrogel stamps. <i>Langmuir</i> , 2005 , 21, 6436-42	4	109
21	Controlling the shape of filamentous cells of Escherichia coli. <i>Nano Letters</i> , 2005 , 5, 1819-23	11.5	131
20	Torque-actuated valves for microfluidics. <i>Analytical Chemistry</i> , 2005 , 77, 4726-33	7.8	163
19	Escherichia coli swim on the right-hand side. <i>Nature</i> , 2005 , 435, 1271-4	50.4	341
18	Combining microscience and neurobiology. <i>Current Opinion in Neurobiology</i> , 2005 , 15, 560-7	7.6	49
17	Modeling the anodic half-cell of a low-temperature coal fuel cell. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 5682-6	16.4	26
16	Generation of Monodisperse Particles by Using Microfluidics: Control over Size, Shape, and Composition. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 3799-3799	16.4	52
15	Generation of Monodisperse Particles by Using Microfluidics: Control over Size, Shape, and Composition. <i>Angewandte Chemie</i> , 2005 , 117, 734-738	3.6	152

14	Modeling the Anodic Half-Cell of a Low-Temperature Coal Fuel Cell. <i>Angewandte Chemie</i> , 2005 , 117, 5828-5832	3.6	15
13	Generation of Monodisperse Particles by Using Microfluidics: Control over Size, Shape, and Composition. <i>Angewandte Chemie</i> , 2005 , 117, 3865-3865	15.6	123
12	Direct patterning of mammalian cells onto porous tissue engineering substrates using agarose stamps. <i>Biomaterials</i> , 2005 , 26, 7636-41	11.5	281
11	Microoxen: microorganisms to move microscale loads. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 11963-7	6.2	15
10	Chiral silylation reagents: determining configuration via NMR-spectroscopic coanalysis. <i>Organic Letters</i> , 2004 , 6, 3019-22	6.2	19
9	New silyl ether reagents for the absolute stereochemical determination of secondary alcohols. <i>Organic Letters</i> , 2003 , 5, 1745-8	11.5	35
8	Mayolenes: labile defensive lipids from the glandular hairs of a caterpillar (<i>Pieris rapae</i>). <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 6822-7	4.2	11
7	Synthesis of mayolene-16 and mayolene-18: larval defensive lipids from the European cabbage butterfly. <i>Journal of Organic Chemistry</i> , 2002 , 67, 5896-900	4.5	22
6	Iridoid biosynthesis in staphylinid rove beetles (Coleoptera: Staphylinidae, Philonthinae). <i>Insect Biochemistry and Molecular Biology</i> , 2001 , 31, 583-91	2.2	0
5	Cycloalkene budding: mass spectrometric studies of competitive and dual cycloalkene extrusion reactions from doubly unsaturated aldehyde N,N-dimethylhydrazones. <i>Rapid Communications in Mass Spectrometry</i> , 2000 , 14, 1105-9	6.2	18
4	Chiral silylation reagents for the determination of absolute configuration by NMR spectroscopy. <i>Organic Letters</i> , 2000 , 2, 2381-3	4.2	33
3	Synthesis of Polyether Exomethylene Paracyclophanes via an Intramolecular Pd-Catalyzed Bis-Enyne Benzannulation Protocol. <i>Journal of Organic Chemistry</i> , 1998 , 63, 1217-1220		
2	Bacterial swarming reduces <i>Proteus mirabilis</i> and <i>Vibrio parahaemolyticus</i> cell stiffness and increases β -lactam susceptibility		1
1	Rcs phosphorelay activation in cardiolipin-deficient <i>Escherichia coli</i> reduces biofilm formation		2