William E Bentley

List of Publications by Year
in descending order

349 papers	15,457 citations	19608 61 h-index	32761 100 g-index
353 all docs	353 docs citations	353 times ranked	12898 citing authors

#	Article	IF	Citations
1	Biofabrication with Chitosan. Biomacromolecules, 2005, 6, 2881-2894.	2.6	667
2	Plasmid-encoded protein: The principal factor in the â€œmetabolic burdenâ€•associated with recombinant bacteria. Biotechnology and Bioengineering, 1990, 35, 668-681.	1.7	497
3	Autoinducer 2 Controls Biofilm Formation in Escherichia coli through a Novel Motility Quorum-Sensing Regulator (MqsR, B3022). Journal of Bacteriology, 2006, 188, 305-316.	1.0	478
4	Engineered probiotic Escherichia coli can eliminate and prevent Pseudomonas aeruginosa gut infection in animal models. Nature Communications, 2017, 8, 15028.	5.8	323
5	Voltage-Dependent Assembly of the Polysaccharide Chitosan onto an Electrode Surface. Langmuir, 2002, 18, 8620-8625.	1.6	283
6	DNA Microarray-Based Identification of Genes Controlled by Autoinducer 2-Stimulated Quorum Sensing in Escherichia coli. Journal of Bacteriology, 2001, 183, 5239-5247.	1.0	238
7	Integrating artificial with natural cells to translate chemical messages that direct E. coli behaviour. Nature Communications, 2014, 5, 4012.	5.8	210
8	Quorum Sensing in Escherichia coli Is Signaled by AI-2/LsrR: Effects on Small RNA and Biofilm Architecture. Journal of Bacteriology, 2007, 189, 6011-6020.	1.0	200
9	Electrochemically Induced Deposition of a Polysaccharide Hydrogel onto a Patterned Surface. Langmuir, 2003, 19, 4058-4062.	1.6	184
10	Two-Way Chemical Communication between Artificial and Natural Cells. ACS Central Science, 2017, 3, 117-123.	5.3	178
11	Enterohemorrhagic Escherichia coli Biofilms Are Inhibited by 7-Hydroxyindole and Stimulated by Isatin. Applied and Environmental Microbiology, 2007, 73, 4100-4109.	1.4	175
12	Evanescent Wave Long-Period Fiber Bragg Grating as an Immobilized Antibody Biosensor. Analytical Chemistry, 2000, 72, 2895-2900.	3.2	171
13	Cyclic AMP (cAMP) and cAMP Receptor Protein Influence both Synthesis and Uptake of Extracellular Autoinducer 2 in Escherichia coli. Journal of Bacteriology, 2005, 187, 2066-2076.	1.0	164
14	Patterned Assembly of Genetically Modified Viral Nanotemplates via Nucleic Acid Hybridization. Nano Letters, 2005, 5, 1931-1936.	4.5	156
15	In situ quantitative visualization and characterization of chitosan electrodeposition with paired sidewall electrodes. Soft Matter, 2010, 6, 3177.	1.2	150
16	Quorum sensing and bacterial cross-talk in biotechnology. Current Opinion in Biotechnology, 2004, 15, 495-502.	3.3	143
17	luxS -Dependent Gene Regulation in Escherichia coli K-12 Revealed by Genomic Expression Profiling. Journal of Bacteriology, 2005, 187, 8350-8360.	1.0	142
18	From unicellular properties to multicellular behavior: bacteria quorum sensing circuitry and applications. Current Opinion in Biotechnology, 2008, 19, 550-555.	3.3	140

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19	Monitoring GFP-operon fusion protein expression during high cell density cultivation ofEscherichia coli using an on-line optical sensor. , 1999, 65, 54-64.		136
20	Global Transcriptome Analysis of Staphylococcus aureus Response to Hydrogen Peroxide. Journal of Bacteriology, 2006, 188, 1648-1659.	1.0	133
21	Autonomous induction of recombinant proteins by minimally rewiring native quorum sensing regulon of E. coli. Metabolic Engineering, 2010, 12, 291-297.	3.6	125
22	Oxidation of Benzene to Phenol, Catechol, and 1,2,3-Trihydroxybenzene by Toluene 4-Monooxygenase of Pseudomonas mendocina KR1 and Toluene 3-Monooxygenase of Ralstonia pickettii PKO1. Applied and Environmental Microbiology, 2004, 70, 3814-3820.	1.4	122
23	Electronic control of gene expression and cell behaviour in Escherichia coli through redox signalling. Nature Communications, 2017, 8, 14030.	5.8	120
24	Electroaddressing of Cell Populations by Coâ€Ðeposition with Calcium Alginate Hydrogels. Advanced Functional Materials, 2009, 19, 2074-2080.	7.8	115
25	Spatially Selective Deposition of a Reactive Polysaccharide Layer onto a Patterned Template. Langmuir, 2003, 19, 519-524.	1.6	111
26	Indole cell signaling occurs primarily at low temperatures in Escherichia coli. ISME Journal, 2008, 2, 1007-1023.	4.4	111
27	Biomimetic Approach to Confer Redox Activity to Thin Chitosan Films. Advanced Functional Materials, 2010, 20, 2683-2694.	7.8	109
28	Observations of green fluorescent protein as a fusion partner in genetically engineeredEscherichia coli: Monitoring protein expression and solubility. Biotechnology and Bioengineering, 2000, 67, 565-574.	1.7	108
29	Developing next generation antimicrobials by intercepting AI-2 mediated quorum sensing. Enzyme and Microbial Technology, 2011, 49, 113-123.	1.6	104
30	Green Fluorescent Protein as a Real Time Quantitative Reporter of Heterologous Protein Production. Biotechnology Progress, 1998, 14, 351-354.	1.3	103
31	Cross Species Quorum Quenching Using a Native AI-2 Processing Enzyme. ACS Chemical Biology, 2010, 5, 223-232.	1.6	103
32	Mechanism of anodic electrodeposition of calcium alginate. Soft Matter, 2011, 7, 5677.	1.2	103
33	Nature-Inspired Creation of Proteinâ^'Polysaccharide Conjugate and Its Subsequent Assembly onto a Patterned Surface. Langmuir, 2003, 19, 9382-9386.	1.6	102
34	Effects of oxygen/glucose/glutamine feeding on insect cell baculovirus protein expression: A study on epoxide hydrolase production. Biotechnology Progress, 1993, 9, 355-361.	1.3	101
35	Mapping Stress-Induced Changes in Autoinducer AI-2 Production in Chemostat-Cultivated Escherichia coli K-12. Journal of Bacteriology, 2001, 183, 2918-2928.	1.0	96
36	Biofabrication to build the biologyâ€“device interface. Biofabrication, 2010, 2, 022002.	3.7	94

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37	Bacterial co-culture with cell signaling translator and growth controller modules for autonomously regulated culture composition. Nature Communications, 2019, 10, 4129.	5.8	91
38	AI-2 analogs and antibiotics: a synergistic approach to reduce bacterial biofilms. Applied Microbiology and Biotechnology, 2013, 97, 2627-2638.	1.7	87
39	Chitosan to Connect Biology to Electronics: Fabricating the Bio-Device Interface and Communicating Across This Interface. Polymers, 2015, 7, 1-46.	2.0	87
40	Engineered biological nanofactories trigger quorum sensing response in targeted bacteria. Nature Nanotechnology, 2010, 5, 213-217.	15.6	86
41	Amplified and in Situ Detection of Redox-Active Metabolite Using a Biobased Redox Capacitor. Analytical Chemistry, 2013, 85, 2102-2108.	3.2	86
42	Coupling Electrodeposition with Layerâ€byâ€Layer Assembly to Address Proteins within Microfluidic Channels. Advanced Materials, 2011, 23, 5817-5821.	11.1	83
43	Electrodeposition of a Biopolymeric Hydrogel: Potential for One-Step Protein Electroaddressing. Biomacromolecules, 2012, 13, 1181-1189.	2.6	82
44	Green fluorescent protein inSaccharomyces cerevisiae: Real-time studies of theGAL1 promoter. Biotechnology and Bioengineering, 2000, 70, 187-196.	1.7	80
45	Altering Toluene 4-Monooxygenase by Active-Site Engineering for the Synthesis of 3-Methoxycatechol, Methoxyhydroquinone, and Methylhydroquinone. Journal of Bacteriology, 2004, 186, 4705-4713.	1.0	76
46	A novel structured kinetic modeling approach for the analysis of plasmid instability in recombinant bacterial cultures. Biotechnology and Bioengineering, 1989, 33, 49-61.	1.7	74
47	Combinatorial Screening for Enzyme-Mediated Coupling. Tyrosinase-Catalyzed Coupling To Create Proteinâ˜Chitosan Conjugates. Biomacromolecules, 2001, 2, 456-462.	2.6	74
48	Green Fluorescent Protein as a Noninvasive Stress Probe in Resting Escherichia coli Cells. Applied and Environmental Microbiology, 1999, 65, 409-414.	1.4	74
49	Enzymatic Methods for in Situ Cell Entrapment and Cell Release. Biomacromolecules, 2003, 4, 1558-1563.	2.6	73
50	Synthetic Biology for Manipulating Quorum Sensing in Microbial Consortia. Trends in Microbiology, 2020, 28, 633-643.	3.5	72
51	Simplification of Titer Determination for Recombinant Baculovirus by Green Fluorescent Protein Marker. BioTechniques, 1997, 23, 782-786.	0.8	71
52	Redox-capacitor to connect electrochemistry to redox-biology. Analyst, The, 2014, 139, 32-43.	1.7	71
53	Context-Dependent Redox Properties of Natural Phenolic Materials. Biomacromolecules, 2014, 15, 1653-1662.	2.6	71
54	Chitosan-mediated in situ biomolecule assembly in completely packaged microfluidic devices. Lab on A Chip, 2006, 6, 1315.	3.1	68

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55	Biocompatible multi-address 3D cell assembly in microfluidic devices using spatially programmable gel formation. Lab on A Chip, 2011, 11, 2316.	3.1	68
56	Evidence of link between quorum sensing and sugar metabolism in Escherichia coli revealed via cocrystal structures of LsrK and HPr. Science Advances, 2018, 4, eaar7063.	4.7	68
57	Reverse Engineering Applied to Red Human Hair Pheomelanin Reveals Redox-Buffering as a Pro-Oxidant Mechanism. Scientific Reports, 2015, 5, 18447.	1.6	67
58	Bacterial Secretions of Nonpathogenic Escherichia coli Elicit Inflammatory Pathways: a Closer Investigation of Interkingdom Signaling. MBio, 2015, 6, e00025.	1.8	67
59	Synthetic Analogs Tailor Native AI-2 Signaling Across Bacterial Species. Journal of the American Chemical Society, 2010, 132, 11141-11150.	6.6	66
60	Comparative global transcription analysis of sodium hypochlorite, peracetic acid, and hydrogen peroxide on Pseudomonas aeruginosa. Applied Microbiology and Biotechnology, 2007, 76, 1093-1105.	1.7	65
61	Redox Capacitor to Establish Bioâ€Device Redoxâ€Connectivity. Advanced Functional Materials, 2012, 22, 1409-1416.	7.8	65
62	Autonomous bacterial localization and gene expression based on nearby cell receptor density. Molecular Systems Biology, 2013, 9, 636.	3.2	65
63	Response dynamics of 26-, 34-, 39-, 54-, and 80-kDa proteases in induced cultures of recombinantEscherichia coli. Biotechnology and Bioengineering, 1993, 42, 675-685.	1.7	64
64	Dynamics of induced CAT expression inE. coli. Biotechnology and Bioengineering, 1991, 38, 749-760.	1.7	63
65	Spectroelectrochemical Reverse Engineering DemonstratesThat Melaninâ€™s Redox and Radical Scavenging Activities Are Linked. Biomacromolecules, 2017, 18, 4084-4098.	2.6	63
66	Enhancement of recombinant protein synthesis and stability via coordinated amino acid addition. Biotechnology and Bioengineering, 1993, 41, 557-565.	1.7	62
67	A Robust Technique for Assembly of Nucleic Acid Hybridization Chips Based on Electrochemically Templated Chitosan. Analytical Chemistry, 2004, 76, 365-372.	3.2	61
68	Electroaddressing Functionalized Polysaccharides as Model Biofilms for Interrogating Cell Signaling. Advanced Functional Materials, 2012, 22, 519-528.	7.8	61
69	On-line green fluorescent protein sensor with LED excitation. , 1997, 55, 921-926.		60
70	Quorum signaling via AI-2 communicates the ?Metabolic Burden? associated with heterologous protein production inEscherichia coli. Biotechnology and Bioengineering, 2001, 75, 439-450.	1.7	60
71	Electrodeposition of a weak polyelectrolyte hydrogel: remarkable effects of salt on kinetics, structure and properties. Soft Matter, 2013, 9, 2703.	1.2	59
72	Programmable Electrofabrication of Porous Janus Films with Tunable Janus Balance for Anisotropic Cell Guidance and Tissue Regeneration. Advanced Functional Materials, 2019, 29, 1900065.	7.8	58

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73	In situ generation of pH gradients in microfluidic devices for biofabrication of freestanding, semi-permeable chitosan membranes. Lab on A Chip, 2010, 10, 59-65.	3.1	57
74	Bioelectronic control of a microbial community using surface-assembled electrogenetic cells to route signals. Nature Nanotechnology, 2021, 16, 688-697.	15.6	56
75	Microsystems for biofilm characterization and sensing â€“ A review. Biofilm, 2020, 2, 100015.	1.5	55
76	Biofabricating Multifunctional Soft Matter with Enzymes and Stimuliâ€Responsive Materials. Advanced Functional Materials, 2012, 22, 3004-3012.	7.8	54
77	Nature's Other Self-Assemblers. Science, 2013, 341, 136-137.	6.0	54
78	A new design for an artificial cell: polymer microcapsules with addressable inner compartments that can harbor biomolecules, colloids or microbial species. Chemical Science, 2017, 8, 6893-6903.	3.7	54
79	Expression of green fluorescent protein in insect larvae and its application for heterologous protein production. , 1997, 56, 239-247.		53
80	Expression and purification of human interleukin-2 simplified as a fusion with green fluorescent protein in suspended Sf-9 insect cells. Journal of Biotechnology, 1999, 69, 9-17.	1.9	53
81	A stochastic model of Escherichia coli Aiâ€2 quorum signal circuit reveals alternative synthesis pathways. Molecular Systems Biology, 2006, 2, 67.	3.2	53
82	Programmable assembly of a metabolic pathway enzyme in a pre-packaged reusable bioMEMS device. Lab on A Chip, 2008, 8, 420.	3.1	53
83	Redox-Cycling and H₂O₂ Generation by Fabricated Catecholic Films in the Absence of Enzymes. Biomacromolecules, 2011, 12, 880-888.	2.6	53
84	A kinetic and statistical-thermodynamic model for baculovirus infection and virus-like particle assembly in suspended insect cells. Chemical Engineering Science, 2000, 55, 3991-4008.	1.9	52
85	Electronic modulation of biochemical signal generation. Nature Nanotechnology, 2014, 9, 605-610.	15.6	52
86	Biomimetic fabrication of information-rich phenolic-chitosan films. Soft Matter, 2011, 7, 9601.	1.2	51
87	Tyrosine-based â€œActivatable Pro-Tagâ€: Enzyme-catalyzed protein capture and release. Biotechnology and Bioengineering, 2006, 93, 1207-1215.	1.7	50
88	Toxicogenomic analysis of sodium hypochlorite antimicrobial mechanisms in Pseudomonas aeruginosa. Applied Microbiology and Biotechnology, 2007, 74, 176-185.	1.7	50
89	Beyond silencing â€” engineering applications of RNA interference and antisense technology for altering cellular phenotype. Current Opinion in Biotechnology, 2008, 19, 500-505.	3.3	50
90	Effect of MOI ratio on the composition and yield of chimeric infectious bursal disease virus-like particles by baculovirus co-infection: Deterministic predictions and experimental results. Biotechnology and Bioengineering, 2001, 75, 104-119.	1.7	49

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91	Electro-molecular Assembly: Electrical Writing of Information into an Erasable Polysaccharide Medium. ACS Applied Materials & Interfaces, 2016, 8, 19780-19786.	4.0	49
92	Protein engineering of toluene 4-monooxygenase ofPseudomonas mendocina KR1 for synthesizing 4-nitrocatechol from nitrobenzene. Biotechnology and Bioengineering, 2004, 87, 779-790.	1.7	48
93	An ALD aluminum oxide passivated Surface Acoustic Wave sensor for early biofilm detection. Sensors and Actuators B: Chemical, 2012, 163, 136-145.	4.0	48
94	Effect of electrical energy on the efficacy of biofilm treatment using the bioelectric effect. Npj Biofilms and Microbiomes, 2015, 1, 15016.	2.9	48
95	Quorum Sensing Communication: Molecularly Connecting Cells, Their Neighbors, and Even Devices. Annual Review of Chemical and Biomolecular Engineering, 2020, 11, 447-468.	3.3	48
96	Fed-batch feeding and induction policies that improve foreign protein synthesis and stability by avoiding stress responses. Biotechnology and Bioengineering, 1995, 47, 596-608.	1.7	47
97	Insect larval expression process is optimized by generating fusions with green fluorescent protein. Biotechnology and Bioengineering, 1999, 65, 316-324.	1.7	47
98	A microfluidic-based electrochemical biochip for label-free diffusion-restricted DNA hybridization analysis. Biosensors and Bioelectronics, 2012, 38, 114-120.	5.3	47
99	Compartmentalized Multilayer Hydrogel Formation Using a Stimulus-Responsive Self-Assembling Polysaccharide. ACS Applied Materials & Interfaces, 2014, 6, 2948-2957.	4.0	47
100	A platform of genetically engineered bacteria as vehicles for localized delivery of therapeutics: Toward applications for Crohn's disease. Bioengineering and Translational Medicine, 2018, 3, 209-221.	3.9	47
101	Heat-Shock and Stringent Responses Have Overlapping Protease Activity in Escherichia coli: Implications for Heterologous Protein Yield. Applied Biochemistry and Biotechnology, 1999, 80, 23-38.	1.4	46
102	Signal-Directed Sequential Assembly of Biomolecules on Patterned Surfaces. Langmuir, 2005, 21, 2104-2107.	1.6	46
103	Chitosan-Coated Wires: Conferring Electrical Properties to Chitosan Fibers. Biomacromolecules, 2009, 10, 858-864.	2.6	46
104	Biofabrication of stratified biofilm mimics for observation and control of bacterial signaling. Biomaterials, 2012, 33, 5136-5143.	5.7	46
105	Redox Probing for Chemical Information of Oxidative Stress. Analytical Chemistry, 2017, 89, 1583-1592.	3.2	46
106	Electrical Programming of Soft Matter: Using Temporally Varying Electrical Inputs To Spatially Control Self Assembly. Biomacromolecules, 2018, 19, 364-373.	2.6	46
107	A redox-based electrogenetic CRISPR system to connect with and control biological information networks. Nature Communications, 2020, 11, 2427.	5.8	46
108	Expression of epoxide hydrolase in insect cells: A focus on the infected cell. Biotechnology and Bioengineering, 1993, 42, 240-246.	1.7	45

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109	Altering the Communication Networks of Multispecies Microbial Systems Using a Diverse Toolbox of AI-2 Analogues. ACS Chemical Biology, 2012, 7, 1023-1030.	1.6	45
110	Mechano-transduction of DNA hybridization and dopamine oxidation through electrodeposited chitosan network. Lab on A Chip, 2007, 7, 103-111.	3.1	44
111	Development and validation of a microfluidic reactor for biofilm monitoring via optical methods. Journal of Micromechanics and Microengineering, 2011, 21, 054023.	1.5	44
112	Reverse Engineering To Suggest Biologically Relevant Redox Activities of Phenolic Materials. ACS Chemical Biology, 2013, 8, 716-724.	1.6	44
113	Directed assembly of a bacterial quorum. ISME Journal, 2016, 10, 158-169.	4.4	44
114	Electrochemical Measurement of the Î²-Galactosidase Reporter from Live Cells: A Comparison to the Miller Assay. ACS Synthetic Biology, 2016, 5, 28-35.	1.9	44
115	Using a Redox Modality to Connect Synthetic Biology to Electronics: Hydrogelâ€Based Chemoâ€Electro Signal Transduction for Molecular Communication. Advanced Healthcare Materials, 2017, 6, 1600908.	3.9	44
116	Reagentless Protein Assembly Triggered by Localized Electrical Signals. Advanced Materials, 2009, 21, 984-988.	11.1	43
117	Electrobiofabrication: electrically based fabrication with biologically derived materials. Biofabrication, 2019, 11, 032002.	3.7	43
118	An integrated metabolic modeling approach to describe the energy efficiency ofEscherichia coli fermentations under oxygen-limited conditions: Cellular energetics, carbon flux, and acetate production. Biotechnology and Bioengineering, 1993, 42, 843-853.	1.7	42
119	Reversible Electroaddressing of Selfâ€assembling Aminoâ€Acid Conjugates. Advanced Functional Materials, 2011, 21, 1575-1580.	7.8	42
120	A controlled microfluidic electrochemical lab-on-a-chip for label-free diffusion-restricted DNA hybridization analysis. Biosensors and Bioelectronics, 2015, 64, 579-585.	5.3	42
121	Investigation of subpopulation heterogeneity and plasmid stability in recombinanteschericha coli via a simple segregated model. Biotechnology and Bioengineering, 1993, 42, 222-234.	1.7	41
122	DNA microarray for discrimination between pathogenic 0157:H7 EDL933 and non-pathogenic Escherichia coli strains. Biosensors and Bioelectronics, 2003, 19, 1-8.	5.3	41
123	Effects on Membrane Lateral Pressure Suggest Permeation Mechanisms for Bacterial Quorum Signaling Molecules. Biochemistry, 2011, 50, 6983-6993.	1.2	41
124	Microfluidic Electrochemical Sensor Array for Characterizing Protein Interactions with Various Functionalized Surfaces. Analytical Chemistry, 2011, 83, 5920-5927.	3.2	41
125	Microbial nar-GFP cell sensors reveal oxygen limitations in highly agitated and aerated laboratory-scale fermentors. Microbial Cell Factories, 2009, 8, 6.	1.9	40
126	A surface acoustic wave biofilm sensor integrated with a treatment method based on the bioelectric effect. Sensors and Actuators A: Physical, 2016, 238, 140-149.	2.0	40

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127	Connecting Biology to Electronics: Molecular Communication via Redox Modality. Advanced Healthcare Materials, 2017, 6, 1700789.	3.9	40
128	Quantitative measurement of green fluorescent protein expression. Biotechnology Letters, 1996, 10, 953.	0.5	39
129	Optically clear alginate hydrogels for spatially controlled cell entrapment and culture at microfluidic electrode surfaces. Lab on A Chip, 2013, 13, 1854.	3.1	39
130	Global Transcriptomic Response of Pseudomonas aeruginosa to Chlorhexidine Diacetate. Environmental Science & Technology, 2009, 43, 8406-8415.	4.6	38
131	Framework for online optimization of recombinant protein expression in high-cell-densityEscherichia coli cultures using GFP-fusion monitoring. Biotechnology and Bioengineering, 2000, 69, 275-285.	1.7	37
132	Toxicogenomic Response ofStaphylococcus aureusto Peracetic Acid. Environmental Science & Technology, 2006, 40, 5124-5131.	4.6	37
133	Encapsulated fusion protein confers â€œsense and respondâ€•activity to chitosanâ€“alginate capsules to manipulate bacterial quorum sensing. Biotechnology and Bioengineering, 2013, 110, 552-562.	1.7	37
134	Redox Is a Global Biodevice Information Processing Modality. Proceedings of the IEEE, 2019, 107, 1402-1424.	16.4	37
135	Chimeric infectious bursal disease virus-like particles expressed in insect cells and purified by immobilized metal affinity chromatography. , 1999, 63, 721-729.		36
136	Microarray Analysis of Toxicogenomic Effects of Peracetic Acid onPseudomonas aeruginosa. Environmental Science & Technology, 2005, 39, 5893-5899.	4.6	36
137	Towards oriented assembly of proteins onto magnetic nanoparticles. Biochemical Engineering Journal, 2008, 38, 164-170.	1.8	36
138	Inâ€Film Bioprocessing and Immunoanalysis with Electroaddressable Stimuliâ€Responsive Polysaccharides. Advanced Functional Materials, 2010, 20, 1645-1652.	7.8	36
139	Reverse Engineering To Characterize Redox Properties: Revealing Melaninâ€™s Redox Activity through Mediated Electrochemical Probing. Chemistry of Materials, 2018, 30, 5814-5826.	3.2	36
140	Generating controlled reducing environments in aerobic recombinantEscherichia coli fermentations: Effects on cell growth, oxygen uptake, heat shock protein expression, and in vivo CAT activity. , 1998, 59, 248-259.		35
141	Diffusion of interleukinâ€2 from cells overlaid with cytocompatible enzymeâ€crosslinked gelatin hydrogels. Journal of Biomedical Materials Research - Part A, 2010, 95A, 25-32.	2.1	35
142	Biological nanofactories facilitate spatially selective capture and manipulation of quorum sensing bacteria in a bioMEMS device. Lab on A Chip, 2010, 10, 1128.	3.1	35
143	Distal modulation of bacterial cellâ€“cell signalling in a synthetic ecosystem using partitioned microfluidics. Lab on A Chip, 2015, 15, 1842-1851.	3.1	34
144	Radical Scavenging Activities of Biomimetic Catechol-Chitosan Films. Biomacromolecules, 2018, 19, 3502-3514.	2.6	34

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145	Chitosan scaffolds for biomolecular assembly: Coupling nucleic acid probes for detecting hybridization. Biotechnology and Bioengineering, 2003, 83, 646-652.	1.7	33
146	A High-Throughput Approach to Promoter Study Using Green Fluorescent Protein. Biotechnology Progress, 2004, 20, 1634-1640.	1.3	33
147	Quantitative and kinetic study of oxidative stress regulons using green fluorescent protein. Biotechnology and Bioengineering, 2005, 89, 574-587.	1.7	33
148	Information processing through a bio-based redox capacitor: Signatures for redox-cycling. Bioelectrochemistry, 2014, 98, 94-102.	2.4	33
149	Nano-guided cell networks as conveyors of molecular communication. Nature Communications, 2015, 6, 8500.	5.8	33
150	An Integrated Microsystem for Real-Time Detection and Threshold-Activated Treatment of Bacterial Biofilms. ACS Applied Materials & Interfaces, 2017, 9, 31362-31371.	4.0	33
151	Protein assembly onto patterned microfabricated devices through enzymatic activation of fusion proâ€tag. Biotechnology and Bioengineering, 2008, 99, 499-507.	1.7	32
152	Electrochemical reverse engineering: A systems-level tool to probe the redox-based molecular communication of biology. Free Radical Biology and Medicine, 2017, 105, 110-131.	1.3	32
153	3D-Printed electrochemical sensor-integrated transwell systems. Microsystems and Nanoengineering, 2020, 6, 100.	3.4	32
154	A fabrication platform for electrically mediated optically active biofunctionalized sites in BioMEMS. Lab on A Chip, 2005, 5, 583.	3.1	31
155	Alâ€2 biosynthesis module in a magnetic nanofactory alters bacterial response via localized synthesis and delivery. Biotechnology and Bioengineering, 2009, 102, 390-399.	1.7	31
156	Orthogonal Enzymatic Reactions for the Assembly of Proteins at Electrode Addresses. Langmuir, 2009, 25, 338-344.	1.6	31
157	Electrochemical Fabrication of Functional Gelatin-Based Bioelectronic Interface. Biomacromolecules, 2016, 17, 558-563.	2.6	31
158	Site-specific immobilization of endoglycosidases for streamlined chemoenzymatic glycan remodeling of antibodies. Carbohydrate Research, 2018, 458-459, 77-84.	1.1	31
159	Engineering bacterial motility towards hydrogen-peroxide. PLoS ONE, 2018, 13, e0196999.	1.1	31
160	Optimal Induction of Protein Synthesis in Recombinant Bacterial Cultures. Annals of the New York Academy of Sciences, 1990, 589, 121-138.	1.8	30
161	Enhancing Yield of Infectious Bursal Disease Virus Structural Proteins in Baculovirus Expression Systems: Focus on Media, Protease Inhibitors, and Dissolved Oxygen. Biotechnology Progress, 1999, 15, 1065-1071.	1.3	30
162	A Recombinant Lipoprotein Antigen against Lyme Disease Expressed in E. coli: Fermentor Operating Strategies for Improved Yield. Biotechnology Progress, 2000, 16, 571-576.	1.3	30

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163	Differential rates of gene expression monitored by green fluorescent protein. Biotechnology and Bioengineering, 2002, 79, 429-437.	1.7	30
164	Magnetic nanofactories: Localized synthesis and delivery of quorum-sensing signaling molecule autoinducer-2 to bacterial cell surfaces. Metabolic Engineering, 2007, 9, 228-239.	3.6	30
165	Biofabrication of antibodies and antigens via IgGâ€binding domain engineered with activatable pentatyrosine proâ€tag. Biotechnology and Bioengineering, 2009, 103, 231-240.	1.7	30
166	Glucose Oxidase-Mediated Gelation: A Simple Test To Detect Glucose in Food Products. Journal of Agricultural and Food Chemistry, 2012, 60, 8963-8967.	2.4	30
167	Accessing biology's toolbox for the mesoscale biofabrication of soft matter. Soft Matter, 2013, 9, 6019.	1.2	30
168	Colloidal Properties of Nanoerythrosomes Derived from Bovine Red Blood Cells. Langmuir, 2016, 32, 171-179.	1.6	30
169	Redox Electrochemistry to Interrogate and Control Biomolecular Communication. IScience, 2020, 23, 101545.	1.9	30
170	Regiospecific oxidation of naphthalene and fluorene by toluene monooxygenases and engineered toluene 4-monooxygenases ofPseudomonas mendocina KR1. Biotechnology and Bioengineering, 2005, 90, 85-94.	1.7	29
171	Phenol and 2-naphthol production by toluene 4-monooxygenases using an aqueous/dioctyl phthalate system. Applied Microbiology and Biotechnology, 2005, 68, 614-621.	1.7	29
172	Redox-Based Synthetic Biology Enables Electrochemical Detection of the Herbicides Dicamba and Roundup via Rewired Escherichia coli. ACS Sensors, 2019, 4, 1180-1184.	4.0	29
173	Enhancement of organophosphorus hydrolase yield inEscherichia coli using multiple gene fusions. Biotechnology and Bioengineering, 2001, 75, 100-103.	1.7	28
174	Impediments to Secretion of Green Fluorescent Protein and Its Fusion from Saccharomyces cerevisiae. Biotechnology Progress, 2002, 18, 831-838.	1.3	28
175	Chitosan Biotinylation and Electrodeposition for Selective Protein Assembly. Macromolecular Bioscience, 2008, 8, 451-457.	2.1	28
176	Electroaddressing Agarose Using Fmoc-Phenylalanine as a Temporary Scaffold. Langmuir, 2011, 27, 7380-7384.	1.6	28
177	LsrR Quorum Sensing â€œSwitchâ€•Is Revealed by a Bottom-Up Approach. PLoS Computational Biology, 2011, 7, e1002172.	1.5	28
178	Evolved Quorum Sensing Regulator, LsrR, for Altered Switching Functions. ACS Synthetic Biology, 2014, 3, 210-219.	1.9	28
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