Douglas S Clark

List of Publications by Year
in descending order

63 papers	2,195 citations	236925 25 h-index	233421 45 g-index
66 all docs	66 docs citations	66 times ranked	2710 citing authors

#	Article	IF	Citations
1	Abiological catalysis by artificial haem proteins containing noble metals in place of iron. Nature, 2016, 534, 534-537.	27.8	360
2	Chemoselective, Enzymatic Câ€“H Bond Amination Catalyzed by a Cytochrome P450 Containing an Ir(Me)-PIX Cofactor. Journal of the American Chemical Society, 2017, 139, 1750-1753.	13.7	147
3	Structure and Function of Subtilisin BPNâ€˜ Solubilized in Organic Solvents. Journal of the American Chemical Society, 1997, 119, 70-76.	13.7	119
4	Escherichia coli for biofuel production: bridging the gap from promise to practice. Trends in Biotechnology, 2012, 30, 538-545.	9.3	86
5	Beyond Iron: Iridium-Containing P450 Enzymes for Selective Cyclopropanations of Structurally Diverse Alkenes. ACS Central Science, 2017, 3, 302-308.	11.3	85
6	Production of an acetone-butanol-ethanol mixture from Clostridium acetobutylicum and its conversion to high-value biofuels. Nature Protocols, 2015, 10, 528-537.	12.0	77
7	High-throughput and combinatorial gene expression on a chip for metabolism-induced toxicology screening. Nature Communications, 2014, 5, 3739.	12.8	75
8	The Role of Interfacial Reactions in Determining Plasmaâ€“Liquid Chemistry. Plasma Chemistry and Plasma Processing, 2016, 36, 1393-1415.	2.4	64
9	Transition state stabilization of subtilisins in organic media. Biotechnology and Bioengineering, 1994, 43, 515-520.	3.3	62
10	Structural Insights into the Affinity of Cel7A Carbohydrate-binding Module for Lignin. Journal of Biological Chemistry, 2015, 290, 22818-22826.	3.4	62
11	Siteâ€Selective Functionalization of (sp³)Câˆ’H Bonds Catalyzed by Artificial Metalloenzymes Containing an Iridiumâ€Porphyrin Cofactor. Angewandte Chemie - International Edition, 2019, 58, 13954-13960.	13.8	62
12	Transcriptional profiling of the hyperthermophilic methanarchaeon Methanococcus jannaschii in response to lethal heat and non-lethal cold shock. Environmental Microbiology, 2005, 7, 789-797.	3.8	56
13	Unnatural biosynthesis by an engineered microorganism with heterologously expressed natural enzymes and an artificial metalloenzyme. Nature Chemistry, 2021, 13, 1186-1191.	13.6	56
14	High-Throughput Toxicity and Phenotypic Screening of 3D Human Neural Progenitor Cell Cultures on a Microarray Chip Platform. Stem Cell Reports, 2016, 7, 970-982.	4.8	55
15	Effect of Discharge Parameters and Surface Characteristics on Ambientâ€Gas Plasma Disinfection. Plasma Processes and Polymers, 2013, 10, 69-76.	3.0	45
16	Engineering Cel7A carbohydrate binding module and linker for reduced lignin inhibition. Biotechnology and Bioengineering, 2016, 113, 1369-1374.	3.3	42
17	Geometrical assembly of ultrastable protein templates for nanomaterials. Nature Communications, 2016, 7, 11771.	12.8	40
18	Enhanced Enzyme Activity through Scaffolding on Customizable Selfâ€Assembling Protein Filaments. Small, 2019, 15, e1805558.	10.0	40

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19	Engineering bioorthogonal proteinâ€“polymer hybrid hydrogel as a functional protein immobilization platform. Chemical Communications, 2019, 55, 806-809.	4.1	38
20	A filamentous molecular chaperone of the prefoldin family from the deep-sea hyperthermophile Methanocaldococcus jannaschii. Protein Science, 2007, 16, 626-634.	7.6	36
21	Biotemplated Metal Nanowires Using Hyperthermophilic Protein Filaments. Small, 2009, 5, 2038-2042.	10.0	32
22	Engineering Clostridium acetobutylicum for production of kerosene and diesel blendstock precursors. Metabolic Engineering, 2014, 25, 124-130.	7.0	31
23	Abiotic reduction of ketones with silanes catalysed by carbonic anhydrase through an enzymatic zinc hydride. Nature Chemistry, 2021, 13, 312-318.	13.6	30
24	Engineering ionic liquid-tolerant cellulases for biofuels production. Protein Engineering, Design and Selection, 2016, 29, 117-122.	2.1	29
25	Green fluorescent protein as a screen for enzymatic activity in ionic liquidâ€“aqueous systems for in situhydrolysis of lignocellulose. Green Chemistry, 2011, 13, 3107-3110.	9.0	28
26	Oligomeric assembly is required for chaperone activity of the filamentous Î³â€prefoldin. FEBS Journal, 2015, 282, 2985-2997.	4.7	27
27	Highâ€throughput identification of factors promoting neuronal differentiation of human neural progenitor cells in microscale 3D cell culture. Biotechnology and Bioengineering, 2019, 116, 168-180.	3.3	25
28	A Comprehensive Modeling Analysis of Formateâ€Mediated Microbial Electrosynthesis**. ChemSusChem, 2021, 14, 344-355.	6.8	24
29	Antimicrobial Synergy Between Ambientâ€‹<scp>G</scp>as Plasma and <scp>UVA</scp> Treatment of Aqueous Solution. Plasma Processes and Polymers, 2013, 10, 1051-1060.	3.0	23
30	Evaluating endoglucanase Cel7Bâ€lignin interaction mechanisms and kinetics using quartz crystal microgravimetry. Biotechnology and Bioengineering, 2015, 112, 2256-2266.	3.3	23
31	Functional Applications of Nucleic Acidâ€“Protein Hybrid Nanostructures. Trends in Biotechnology, 2020, 38, 976-989.	9.3	22
32	Protein Calligraphy: A New Concept Begins To Take Shape. ACS Central Science, 2016, 2, 438-444.	11.3	21
33	Generation, Characterization, and Tunable Reactivity of Organometallic Fragments Bound to a Protein Ligand. Journal of the American Chemical Society, 2015, 137, 8261-8268.	13.7	20
34	Structural Determination of a Filamentous Chaperone to Fabricate Electronically Conductive Metalloprotein Nanowires. ACS Nano, 2020, 14, 6559-6569.	14.6	20
35	Engineering protein filaments with enhanced thermostability for nanomaterials. Biotechnology Journal, 2013, 8, 228-236.	3.5	19
36	Simultaneous selection and counterâ€selection for the directed evolution of proteases in <i>E. coli</i> using a cytoplasmic anchoring strategy. Biotechnology and Bioengineering, 2016, 113, 1187-1193.	3.3	17

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37	CRISPR/Cas-directed programmable assembly of multi-enzyme complexes. Chemical Communications, 2020, 56, 4950-4953.	4.1	17
38	Assembly and Evolution of Artificial Metalloenzymes within <i>E. coli</i> Nissle 1917 for Enantioselective and Site-Selective Functionalization of Câ”€H and Câ•C Bonds. Journal of the American Chemical Society, 2022, 144, 883-890.	13.7	16
39	Assembly of Multicomponent Protein Filaments Using Engineered Subunit Interfaces. ACS Synthetic Biology, 2018, 7, 2447-2456.	3.8	15
40	Progress, Challenges, and Opportunities with Artificial Metalloenzymes in Biosynthesis. Biochemistry, 2023, 62, 221-228.	2.5	15
41	Rational shape engineering of the filamentous protein Î³ prefoldin through incremental gene truncation. Biopolymers, 2009, 91, 496-503.	2.4	14
42	Directed Evolution of Artificial Metalloenzymes in Whole Cells. Angewandte Chemie - International Edition, 2022, 61, .	13.8	14
43	Gene Editing to Generate Versatile Human Pluripotent Stem Cell Reporter Lines for Analysis of Differentiation and Lineage Tracing. Stem Cells, 2019, 37, 1556-1566.	3.2	13
44	The importance and future of biochemical engineering. Biotechnology and Bioengineering, 2020, 117, 2305-2318.	3.3	13
45	Highâ€throughput combinatorial screening reveals interactions between signaling molecules that regulate adult neural stem cell fate. Biotechnology and Bioengineering, 2019, 116, 193-205.	3.3	12
46	Delignification of Miscanthus by Extraction. Separation Science and Technology, 2012, 47, 370-376.	2.5	9
47	High-throughput 3D screening for differentiation of hPSC-derived cell therapy candidates. Science Advances, 2020, 6, eaaz1457.	10.3	8
48	Design of Tunable Protein Interfaces Controlled by Post-Translational Modifications. ACS Synthetic Biology, 2020, 9, 2132-2143.	3.8	8
49	Prefoldins in Archaea. Advances in Experimental Medicine and Biology, 2018, 1106, 11-23.	1.6	7
50	Systems-informed genome mining for electroautotrophic microbial production. Bioelectrochemistry, 2022, 145, 108054.	4.6	7
51	Siteâ€Selective Functionalization of (sp 3)Câˆ'H Bonds Catalyzed by Artificial Metalloenzymes Containing an Iridiumâ€Porphyrin Cofactor. Angewandte Chemie, 2019, 131, 14092-14098.	2.0	5
52	Envisioning the â€œAir Economyâ€•â€" Powered by Reticular Chemistry and Sunlight for Clean Air, Clean Energy, and Clean Water. Molecular Frontiers Journal, 2021, 05, 30-37.	1.1	5
53	High-Throughput Discovery of Targeted, Minimally Complex Peptide Surfaces for Human Pluripotent Stem Cell Culture. ACS Biomaterials Science and Engineering, 2021, 7, 1344-1360.	5.2	4
54	Shaping the Future of Protein Engineering. Biochemistry, 2019, 58, 1019-1021.	2.5	3

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55	Filamentous chaperone protein-based hydrogel stabilizes enzymes against thermal inactivation. Chemical Communications, 2021, 57, 5511-5513.	4.1	3
56	Controlled Assembly of the Filamentous Chaperone Gamma-Prefoldin into Defined Nanostructures. Methods in Molecular Biology, 2018, 1798, 293-306.	0.9	2
57	Directed Evolution of Artificial Metalloenzymes in Whole Cells. Angewandte Chemie, 2022, 134, e202110519.	2.0	2
58	A tribute to Professor Jay Bailey: A pioneer in biochemical engineering. AIChE Journal, 2018, 64, 4179-4181.	3.6	1
59	Enzyme Immobilization: Enhanced Enzyme Activity through Scaffolding on Customizable Selfâ€Assembling Protein Filaments (Small 20/2019). Small, 2019, 15, 1970104.	10.0	1
60	Combination ambient gas plasma treatment and chemotherapy. , 2013, , .		0
61	PPPS-2013: Chemical and antimicrobial effects of DC corona with water electrospray compared with surface microdischarge. , 2013, , .		0
62	Klaus Mosbach tribute. Biotechnology and Bioengineering, 2015, 112, 645-647.	3.3	0
63	Production of Multicomponent Protein Templates for the Positioning and Stabilization of Enzymes. Methods in Molecular Biology, 2020, 2073, 101-115.	0.9	0