

Damien Faivre

List of Publications by Year in descending order

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125
papers

6,268
citations

76294

40
h-index

74108

75
g-index

143
all docs

143
docs citations

143
times ranked

6712
citing authors

#	ARTICLE	IF	CITATIONS
1	Diversity of Microbial Metal Sulfide Biomineralization. <i>ChemPlusChem</i> , 2022, 87, .	1.3	17
2	Defining Local Chemical Conditions in Magnetosomes of Magnetotactic Bacteria. <i>Journal of Physical Chemistry B</i> , 2022, 126, 2677-2687.	1.2	2
3	Synchrotron-Based Nano-Ray Absorption Near-Edge Structure Revealing Intracellular Heterogeneity of Iron Species in Magnetotactic Bacteria. <i>Small Science</i> , 2022, 2, .	5.8	9
4	Magnetic Actuation Methods in Bio/Soft Robotics. <i>Advanced Functional Materials</i> , 2021, 31, 2005137.	7.8	126
5	Identification and elimination of genomic regions irrelevant for magnetosome biosynthesis by large-scale deletion in <i>Magnetospirillum gryphiswaldense</i> . <i>BMC Microbiology</i> , 2021, 21, 65.	1.3	8
6	Stokesian dynamics simulations of a magnetotactic bacterium. <i>European Physical Journal E</i> , 2021, 44, 40.	0.7	3
7	Opportunities and utilization of branching and step-out behavior in magnetic microswimmers with a nonlinear response. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	5
8	Bacteriophage-Templated Assembly of Magnetic Nanoparticles and Their Actuation Potential. <i>ChemNanoMat</i> , 2021, 7, 942-949.	1.5	3
9	Wettability of Magnetite Nanoparticles Guides Growth from Stabilized Amorphous Ferrihydrite. <i>Journal of the American Chemical Society</i> , 2021, 143, 10963-10969.	6.6	15
10	Selective Actuation and Tomographic Imaging of Swarming Magnetite Nanoparticles. <i>ACS Applied Nano Materials</i> , 2021, 4, 6752-6759.	2.4	16
11	Magnetite-binding proteins from the magnetotactic bacterium <i>Desulfamplus magnetovallimortis</i> BW-1. <i>Nanoscale</i> , 2021, 13, 20396-20400.	2.8	4
12	Magnetite-Arginine Nanoparticles as a Multifunctional Biomedical Tool. <i>Nanomaterials</i> , 2020, 10, 2014.	1.9	8
13	Selection for Function: From Chemically Synthesized Prototypes to 3D-Printed Microdevices. <i>Advanced Intelligent Systems</i> , 2020, 2, 2000078.	3.3	2
14	Surface-Enhanced Raman Scattering Microspectroscopy Enables the Direct Characterization of Biomineral-Associated Organic Material on Single Calcareous Microskeletons. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8623-8629.	2.1	1
15	Self-Confined Nucleation of Iron Oxide Nanoparticles in a Nanostructured Amorphous Precursor. <i>Nano Letters</i> , 2020, 20, 5001-5007.	4.5	17
16	High-speed motility originates from cooperatively pushing and pulling flagella bundles in bilophotrichous bacteria. <i>ELife</i> , 2020, 9, .	2.8	27
17	Shaping Magnetite with Poly-arginine and pH: From Small Single Crystals to Large Mesocrystals. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 5514-5518.	2.1	13
18	Magnetic Nanoparticles in Human Cervical Skin. <i>Frontiers in Medicine</i> , 2019, 6, 123.	1.2	15

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19	Magnetic Nanoparticle Chains in Gelatin Ferrogels: Bioinspiration from Magnetotactic Bacteria. <i>Advanced Functional Materials</i> , 2019, 29, 1905996.	7.8	23
20	Biologically encoded magnonics. <i>Nature Communications</i> , 2019, 10, 4345.	5.8	30
21	Decoding Biomineralization: Interaction of a Mad10-Derived Peptide with Magnetite Thin Films. <i>Nano Letters</i> , 2019, 19, 8207-8215.	4.5	9
22	Ectosymbiotic bacteria at the origin of magnetoreception in a marine protist. <i>Nature Microbiology</i> , 2019, 4, 1088-1095.	5.9	57
23	Reducing Conditions Favor Magnetosome Production in <i>Magnetospirillum magneticum</i> AMB-1. <i>Frontiers in Microbiology</i> , 2019, 10, 582.	1.5	13
24	Using Shape Diversity on the Way to Structure-Function Designs for Magnetic Micropropellers. <i>Physical Review Applied</i> , 2019, 11, .	1.5	15
25	The in vivo mechanics of the magnetotactic backbone as revealed by correlative FLIM-FRET and STED microscopy. <i>Scientific Reports</i> , 2019, 9, 19615.	1.6	7
26	Chemotaxis in external fields: Simulations for active magnetic biological matter. <i>PLoS Computational Biology</i> , 2019, 15, e1007548.	1.5	13
27	Swimming with magnets: From biological organisms to synthetic devices. <i>Physics Reports</i> , 2019, 789, 1-54.	10.3	57
28	Tiny particles building huge ore deposits – Particle-based crystallisation in banded iron formation-hosted iron ore deposits (Hamersley Province, Australia). <i>Ore Geology Reviews</i> , 2019, 104, 160-174.	1.1	13
29	Bioinspired multifunctional layered magnetic hybrid materials. <i>Bioinspired, Biomimetic and Nanobiomaterials</i> , 2019, 8, 28-46.	0.7	5
30	The importance of the helical structure of a MamC-derived magnetite-interacting peptide for its function in magnetite formation. <i>Acta Crystallographica Section D: Structural Biology</i> , 2018, 74, 10-20.	1.1	10
31	Native-state imaging of calcifying and noncalcifying microalgae reveals similarities in their calcium storage organelles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 11000-11005.	3.3	49
32	Bead-Based Hydrodynamic Simulations of Rigid Magnetic Micropropellers. <i>Frontiers in Robotics and AI</i> , 2018, 5, 109.	2.0	7
33	Biohybrid and Bioinspired Magnetic Microswimmers. <i>Small</i> , 2018, 14, e1704374.	5.2	100
34	Self-organization and stability of magnetosome chains – A simulation study. <i>PLoS ONE</i> , 2018, 13, e0190265.	1.1	10
35	Combined Experimental and Theoretical Approach to the Kinetics of Magnetite Crystal Growth from Primary Particles. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 1132-1136.	2.1	17
36	Materials Nanoarchitecturing via Cation-Mediated Protein Assembly: Making Limpet Teeth without Mineral. <i>Advanced Materials</i> , 2017, 29, 1701171.	11.1	27

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37	Templated and self-limiting calcite formation directed by coccolith organic macromolecules. <i>Chemical Communications</i> , 2017, 53, 7740-7743.	2.2	16
38	Magneto-Aerotaxis: Bacterial Motility in Magnetic Fields. <i>Biophysical Journal</i> , 2017, 112, 567a.	0.2	1
39	Single crystalline superstructured stable single domain magnetite nanoparticles. <i>Scientific Reports</i> , 2017, 7, 45484.	1.6	48
40	Magnetotactic Bacteria Powered Biohybrids Target <i>E. coli</i> Biofilms. <i>ACS Nano</i> , 2017, 11, 9968-9978.	7.3	154
41	Trace Element Incorporation into Intracellular Pools Uncovers Calcium Pathways in a Coccolithophore. <i>Advanced Science</i> , 2017, 4, 1700088.	5.6	28
42	Pattern formation and collective effects in populations of magnetic microswimmers. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 11LT03.	1.3	34
43	Magnetosome Organization in Magnetotactic Bacteria Unraveled by Ferromagnetic Resonance Spectroscopy. <i>Biophysical Journal</i> , 2017, 113, 637-644.	0.2	17
44	A Bacteria-Based Remotely Tunable Photonic Device. <i>Advanced Optical Materials</i> , 2017, 5, 1600617.	3.6	26
45	Genetically Engineered Organization: Protein Template, Biological Recognition Sites, and Nanoparticles. <i>Advanced Materials Interfaces</i> , 2017, 4, 1600285.	1.9	5
46	Magnetite Nucleation and Growth. , 2017, , 275-291.		9
47	Correlative in situ Analysis of Magnetosome Magnetite Biomineralization. <i>Microscopy and Microanalysis</i> , 2016, 22, 12-13.	0.2	0
48	Elongated magnetite nanoparticle formation from a solid ferrous precursor in a magnetotactic bacterium. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160665.	1.5	20
49	Elastic Properties of Magnetosome Chains. <i>Biophysical Journal</i> , 2016, 110, 469a.	0.2	0
50	Macromolecular recognition directs calcium ions to coccolith mineralization sites. <i>Science</i> , 2016, 353, 590-593.	6.0	86
51	Lattice distortions in coccolith calcite crystals originate from occlusion of biomacromolecules. <i>Journal of Structural Biology</i> , 2016, 196, 147-154.	1.3	21
52	Following iron speciation in the early stages of magnetite magnetosome biomineralization. <i>Journal of Materials Research</i> , 2016, 31, 547-555.	1.2	14
53	Magnetic nanoparticles line up. <i>Nature</i> , 2016, 535, 235-236.	13.7	35
54	A vacuole-like compartment concentrates a disordered calcium phase in a key coccolithophorid alga. <i>Nature Communications</i> , 2016, 7, 11228.	5.8	144

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55	Magnetotactic bacteria. <i>European Physical Journal: Special Topics</i> , 2016, 225, 2173-2188.	1.2	26
56	Control of Biogenic Nanocrystal Formation in Biomineralization. <i>Israel Journal of Chemistry</i> , 2016, 56, 227-241.	1.0	28
57	Nanoparticles for intravascular applications: physicochemical characterization and cytotoxicity testing. <i>Nanomedicine</i> , 2016, 11, 597-616.	1.7	57
58	Steering magnetic micropropellers along independent trajectories. <i>Journal Physics D: Applied Physics</i> , 2016, 49, 065003.	1.3	20
59	Structure–function studies of the magnetite-biomineralizing magnetosome-associated protein MamC. <i>Journal of Structural Biology</i> , 2016, 194, 244-252.	1.3	40
60	Formation of magnetic nanoparticle chains in bacterial systems. <i>MRS Bulletin</i> , 2015, 40, 509-515.	1.7	12
61	Navigation with magnetic nanoparticles: magnetotactic bacteria and magnetic micro-robots. <i>Physica Scripta</i> , 2015, T165, 014044.	1.2	12
62	The giant keyhole limpet radular teeth: A naturally-grown harvest machine. <i>Journal of Structural Biology</i> , 2015, 192, 392-402.	1.3	34
63	Crystal structure of the magnetobacterial protein MtxA C-terminal domain reveals a new sequence-structure relationship. <i>Frontiers in Molecular Biosciences</i> , 2015, 2, 25.	1.6	2
64	Multifunctional layered magnetic composites. <i>Beilstein Journal of Nanotechnology</i> , 2015, 6, 134-148.	1.5	22
65	Correlative Electron and Fluorescence Microscopy of Magnetotactic Bacteria in Liquid: Toward In Vivo Imaging. <i>Microscopy and Microanalysis</i> , 2015, 21, 1499-1500.	0.2	1
66	Positioning the Flagellum at the Center of a Dividing Cell To Combine Bacterial Division with Magnetic Polarity. <i>MBio</i> , 2015, 6, e02286.	1.8	13
67	Field-assisted self-assembly process: general discussion. <i>Faraday Discussions</i> , 2015, 181, 463-479.	1.6	1
68	Self-assembly processes: general discussion. <i>Faraday Discussions</i> , 2015, 181, 299-323.	1.6	2
69	New routes to control nanoparticle synthesis: general discussion. <i>Faraday Discussions</i> , 2015, 181, 147-179.	1.6	2
70	The Combination of Random Mutagenesis and Sequencing Highlight the Role of Unexpected Genes in an Intractable Organism. <i>PLoS Genetics</i> , 2015, 11, e1004895.	1.5	6
71	Elastic properties of magnetosome chains. <i>New Journal of Physics</i> , 2015, 17, 043007.	1.2	32
72	The triathlon of magnetic actuation: Rolling, propelling, swimming with a single magnetic material. <i>Scientific Reports</i> , 2015, 5, 9364.	1.6	34

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73	From Bacteria to Mollusks: The Principles Underlying the Biomineralization of Iron Oxide Materials. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 4728-4747.	7.2	95
74	Fast Magnetic Micropropellers with Random Shapes. <i>Nano Letters</i> , 2015, 15, 7064-7070.	4.5	61
75	Polysaccharide stabilized nanoparticles for deacidification and strengthening of paper. <i>RSC Advances</i> , 2015, 5, 32950-32961.	1.7	28
76	Iron solubility, colloids and their impact on iron (oxyhydr)oxide formation from solution. <i>Earth-Science Reviews</i> , 2015, 150, 520-530.	4.0	47
77	Biologically controlled synthesis and assembly of magnetite nanoparticles. <i>Faraday Discussions</i> , 2015, 181, 71-83.	1.6	34
78	Intracellular biomineralization in bacteria. <i>Frontiers in Microbiology</i> , 2014, 5, 293.	1.5	21
79	Keeping Nanoparticles Fully Functional: Long-Term Storage and Alteration of Magnetite. <i>ChemPlusChem</i> , 2014, 79, 1225-1233.	1.3	26
80	Synthesis and Characterization of Gelatin-Based Magnetic Hydrogels. <i>Advanced Functional Materials</i> , 2014, 24, 3187-3196.	7.8	114
81	Manganese incorporation into the magnetosome magnetite: magnetic signature of doping. <i>European Journal of Mineralogy</i> , 2014, 26, 457-471.	0.4	29
82	Magnetite Crystal Orientation in Magnetosome Chains. <i>Advanced Functional Materials</i> , 2014, 24, 3926-3932.	7.8	48
83	Distinguishing magnetic particle size of iron oxide nanoparticles with first-order reversal curves. <i>Journal of Applied Physics</i> , 2014, 116, .	1.1	47
84	A Direct Biocombinatorial Strategy toward Next Generation, Mussel-Glue Inspired Saltwater Adhesives. <i>Journal of the American Chemical Society</i> , 2014, 136, 12667-12674.	6.6	82
85	Biomimetic Magnetite Formation: From Biocombinatorial Approaches to Mineralization Effects. <i>Langmuir</i> , 2014, 30, 2129-2136.	1.6	54
86	Diversity of Magneto-Aerotactic Behaviors and Oxygen Sensing Mechanisms in Cultured Magnetotactic Bacteria. <i>Biophysical Journal</i> , 2014, 107, 527-538.	0.2	122
87	Probing the Mechanical Properties of Magnetosome Chains in Living Magnetotactic Bacteria. <i>Nano Letters</i> , 2014, 14, 4653-4659.	4.5	34
88	Genetic Dissection of the <i>mamAB</i> and <i>mms6</i> Operons Reveals a Gene Set Essential for Magnetosome Biogenesis in <i>Magnetospirillum gryphiswaldense</i> . <i>Journal of Bacteriology</i> , 2014, 196, 2658-2669.	1.0	110
89	Simultaneous Raman Microspectroscopy and Fluorescence Imaging of Bone Mineralization in Living Zebrafish Larvae. <i>Biophysical Journal</i> , 2014, 106, L17-L19.	0.2	59
90	Magnetic force imaging of a chain of biogenic magnetite and Monte Carlo analysis of tip-particle interaction. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 235403.	1.3	18

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91	Correlative Fluorescence and Liquid Cell STEM of Live Magnetotactic Bacteria. <i>Microscopy and Microanalysis</i> , 2014, 20, 1510-1511.	0.2	1
92	Correlative Electron and Fluorescence Microscopy of Magnetotactic Bacteria in Liquid: Toward In Vivo Imaging. <i>Scientific Reports</i> , 2014, 4, 6854.	1.6	65
93	Influence of Magnetic Fields on Magneto-Aerotaxis. <i>PLoS ONE</i> , 2014, 9, e101150.	1.1	49
94	Structural insight into magnetochrome-mediated magnetite biomineralization. <i>Nature</i> , 2013, 502, 681-684.	13.7	119
95	Selecting for Function: Solution Synthesis of Magnetic Nanopropellers. <i>Nano Letters</i> , 2013, 13, 5373-5378.	4.5	61
96	Nucleation and growth of magnetite from solution. <i>Nature Materials</i> , 2013, 12, 310-314.	13.3	583
97	Formation of Magnetite Nanoparticles at Low Temperature: From Superparamagnetic to Stable Single Domain Particles. <i>PLoS ONE</i> , 2013, 8, e57070.	1.1	105
98	CHAPTER 11. Magnetic Nanoparticles in Bacteria. <i>RSC Smart Materials</i> , 2013, , 235-255.	0.1	0
99	Interaction of Proteins Associated with the Magnetosome Assembly in Magnetotactic Bacteria As Revealed by Two-Hybrid Two-Photon Excitation Fluorescence Lifetime Imaging Microscopy Förster Resonance Energy Transfer. <i>Journal of Physical Chemistry B</i> , 2013, 117, 14642-14648.	1.2	30
100	Magnetotactic bacteria form magnetite from a phosphate-rich ferric hydroxide via nanometric ferric (oxyhydr)oxide intermediates. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 14883-14888.	3.3	133
101	Peptide-Mediated Nanoengineering of Inorganic Particle Surfaces: A General Route toward Surface Functionalization via Peptide Adhesion Domains. <i>Journal of the American Chemical Society</i> , 2012, 134, 2385-2391.	6.6	48
102	From magnetotactic bacteria to hollow spirilla-shaped silica containing a magnetic chain. <i>RSC Advances</i> , 2012, 2, 8007.	1.7	2
103	Insight into the Assembly Properties and Functional Organisation of the Magnetotactic Bacterial Actin-like Homolog, MamK. <i>PLoS ONE</i> , 2012, 7, e34189.	1.1	33
104	The magnetosome membrane protein, MmsF, is a major regulator of magnetite biomineralization in <i>Magnetospirillum magneticum</i> AMB-1. <i>Molecular Microbiology</i> , 2012, 85, 684-699.	1.2	93
105	Interplay of Magnetic Interactions and Active Movements in the Formation of Magnetosome Chains. <i>PLoS ONE</i> , 2012, 7, e33562.	1.1	33
106	Magnetite Biomineralization in Bacteria. <i>Progress in Molecular and Subcellular Biology</i> , 2011, 52, 3-27.	0.9	12
107	Structural purity of magnetite nanoparticles in magnetotactic bacteria. <i>Journal of the Royal Society Interface</i> , 2011, 8, 1011-1018.	1.5	72
108	Evolution of magnetic anisotropy and thermal stability during nanocrystal-chain growth. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	22

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109	Magnetite formation via membrane-bound ferritin and an iron(II) species at the cytoplasmic membrane and in magnetosomes of <i>Magnetospirillum gryphiswaldense</i> . <i>Journal of Physics: Conference Series</i> , 2010, 217, 012020.	0.3	2
110	Dry but flexible magnetic materials. <i>Nature Nanotechnology</i> , 2010, 5, 562-563.	15.6	9
111	Development of Cellular Magnetic Dipoles in Magnetotactic Bacteria. <i>Biophysical Journal</i> , 2010, 99, 1268-1273.	0.2	54
112	Formation of magnetite in <i>Magnetospirillum gryphiswaldense</i> studied with FORC diagrams. <i>Earth, Planets and Space</i> , 2009, 61, 143-150.	0.9	26
113	The influence of temperature and seawater composition on calcite crystal growth mechanisms and kinetics: Implications for Mg incorporation in calcite lattice. <i>Geochimica Et Cosmochimica Acta</i> , 2009, 73, 337-347.	1.6	71
114	Magnetotactic Bacteria and Magnetosomes. <i>Chemical Reviews</i> , 2008, 108, 4875-4898.	23.0	734
115	Environmental parameters affect the physical properties of fast-growing magnetosomes. <i>American Mineralogist</i> , 2008, 93, 463-469.	0.9	90
116	Intracellular Magnetite Biomineralization in Bacteria Proceeds by a Distinct Pathway Involving Membrane-Bound Ferritin and an Iron(II) Species. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 8495-8499.	7.2	126
117	Synthesis of Magnetite Nanoparticles for Bio- and Nanotechnology: Genetic Engineering and Biomimetics of Bacterial Magnetosomes. <i>Macromolecular Bioscience</i> , 2007, 7, 144-151.	2.1	168
118	Anomalous magnetic properties of brain tissue at low temperature: The 50 K anomaly. <i>Journal of Geophysical Research</i> , 2006, 111, n/a-n/a.	3.3	5
119	An integrated approach for determining the origin of magnetite nanoparticles. <i>Earth and Planetary Science Letters</i> , 2006, 243, 53-60.	1.8	35
120	An acidic protein aligns magnetosomes along a filamentous structure in magnetotactic bacteria. <i>Nature</i> , 2006, 440, 110-114.	13.7	486
121	Mineralogical and Isotopic Properties of Biogenic Nanocrystalline Magnetites. , 2006, , 175-196.		1
122	Morphology of nanomagnetite crystals: Implications for formation conditions. <i>American Mineralogist</i> , 2005, 90, 1793-1800.	0.9	32
123	Mineralogical and isotopic properties of inorganic nanocrystalline magnetites. <i>Geochimica Et Cosmochimica Acta</i> , 2004, 68, 4395-4403.	1.6	41
124	The influence of dissolved humic acids on the kinetics of calcite precipitation from seawater solutions. <i>Chemical Geology</i> , 2003, 201, 91-101.	1.4	43
125	Biomimetic Formation of Magnetite Nanoparticles. , 0, , 159-171.		3