Frederic Marin

List of Publications by Year
in descending order

89 papers	4,548 citations	136950 32 h-index	106344 65 g-index
92 all docs	92 docs citations	92 times ranked	3216 citing authors

#	Article	IF	Citations
1	Progressive changes in crystallographic textures of biominerals generate functionally graded ceramics. Materials Advances, 2022, 3, 1527-1538.	5.4	4
2	Inorganic phosphate in growing calcium carbonate abalone shell suggests a shared mineral ancestral precursor. Nature Communications, 2022, 13, 1496.	12.8	14
3	Biomineralization: Integrating mechanism and evolutionary history. Science Advances, 2022, 8, eabl9653.	10.3	86
4	The â€˜Shellomeâ€™ of the Crocus Clam Tridacna crocea Emphasizes Essential Components of Mollusk Shell Biomineralization. Frontiers in Genetics, 2021, 12, 674539.	2.3	10
5	The degradation of intracrystalline mollusc shell proteins: A proteomics study of Spondylus gaederopus. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2021, 1869, 140718.	2.3	2
6	Evolution and biomineralization of pteropod shells. Journal of Structural Biology, 2021, 213, 107779.	2.8	11
7	The role of organic matrices in biomineralization. Discover Materials, 2021, 1, 1.	2.8	1
8	A Natureâ€™s Curiosity: The Argonaut â€œShellâ€•and Its Organic Content. Crystals, 2020, 10, 839.	2.2	9
9	Mollusc shellomes: Past, present and future. Journal of Structural Biology, 2020, 212, 107583.	2.8	45
10	Shell palaeoproteomics: First application of peptide mass fingerprinting for the rapid identification of mollusc shells in archaeology. Journal of Proteomics, 2020, 227, 103920.	2.4	20
11	Acidic Monosaccharides become Incorporated into Calcite Single Crystals**. Chemistry - A European Journal, 2020, 26, 16860-16868.	3.3	17
12	The shell matrix of the european thorny oyster, Spondylus gaederopus: microstructural and molecular characterization. Journal of Structural Biology, 2020, 211, 107497.	2.8	9
13	The shell matrix and microstructure of the Ramâ€™s Horn squid: Molecular and structural characterization. Journal of Structural Biology, 2020, 211, 107507.	2.8	17
14	Hydroxyl-rich macromolecules enable the bio-inspired synthesis of single crystal nanocomposites. Nature Communications, 2019, 10, 5682.	12.8	43
15	Self-healing silk from the sea: role of helical hierarchical structure in<i>Pinna nobilis</i>byssus mechanics. Soft Matter, 2019, 15, 9654-9664.	2.7	6
16	'Palaeoshellomicsâ€™ reveals the use of freshwater mother-of-pearl in prehistory. ELife, 2019, 8, .	6.0	29
17	Pearl grafting: Tracking the biological origin of nuclei by straightforward immunological methods. Aquaculture Research, 2018, 49, 692-700.	1.8	3
18	Skeletal Organic Matrices in Molluscs: Origin, Evolution, Diagenesis. , 2018, , 325-332.		8

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19	Molecular modularity and asymmetry of the molluscan mantle revealed by a gene expression atlas. GigaScience, 2018, 7, .	6.4	22
20	Biochemical characterization of the skeletal matrix of the massive coral, Porites australiensis â€“ The saccharide moieties and their localization. Journal of Structural Biology, 2018, 203, 219-229.	2.8	11
21	A new twist on sea silk: the peculiar protein ultrastructure of fan shell and pearl oyster byssus. Soft Matter, 2018, 14, 5654-5664.	2.7	21
22	Deep conservation of bivalve nacre proteins highlighted by shell matrix proteomics of the Unionoida <i>Elliptio complanata</i> and <i>Villosa lienosa</i>. Journal of the Royal Society Interface, 2017, 14, 20160846.	3.4	72
23	Shell extracts of the edible mussel and oyster induce an enhancement of the catabolic pathway of human skin fibroblasts, in vitro. Cytotechnology, 2017, 69, 815-829.	1.6	13
24	The Shell of the Invasive Bivalve Species Dreissena polymorpha: Biochemical, Elemental and Textural Investigations. PLoS ONE, 2016, 11, e0154264.	2.5	30
25	Staining SDS-PAGE Gels of Skeletal Matrices after Western Blot: A Way to Improve their Sharpness. Key Engineering Materials, 2016, 672, 215-221.	0.4	2
26	Proteins as Functional Units of Biocalcification â€“ An Overview. Key Engineering Materials, 2016, 672, 183-190.	0.4	3
27	Unveiling the Evolution of Bivalve Nacre Proteins by Shell Proteomics of Unionoidae. Key Engineering Materials, 2016, 672, 158-167.	0.4	6
28	Organic matrices in metazoan calcium carbonate skeletons: Composition, functions, evolution. Journal of Structural Biology, 2016, 196, 98-106.	2.8	38
29	Chalky versus foliated: a discriminant immunogold labelling of shell microstructures in the edible oyster Crassostrea gigas. Marine Biology, 2016, 163, 1.	1.5	17
30	Thermal Stability of Nacre Proteins of the Polynesian Pearl Oyster: A Proteomic Study. Key Engineering Materials, 2016, 672, 222-231.	0.4	4
31	A minimal molecular toolkit for mineral deposition? Biochemistry and proteomics of the test matrix of adult specimens of the sea urchin Paracentrotus lividus. Journal of Proteomics, 2016, 136, 133-144.	2.4	18
32	Biomineralix (COST Action TD0903), 2009-2014: An Overview. Key Engineering Materials, 2016, 672, 1-18.	0.4	0
33	Data Mining Approaches to Identify Biomineralization Related Sequences. Key Engineering Materials, 2016, 672, 191-214.	0.4	2
34	<i>In vivo</i> enrichment of magnesium ions modifies sea urchin spicule properties. Bioinspired, Biomimetic and Nanobiomaterials, 2015, 4, 111-120.	0.9	5
35	Nanoscale assembly processes revealed in the nacroprismatic transition zone of Pinna nobilis mollusc shells. Nature Communications, 2015, 6, 10097.	12.8	69
36	Spine and test skeletal matrices of the Mediterranean sea urchin <i>ArbaciaÂlixula</i> â€“ a comparative characterization of their sugar signature. FEBS Journal, 2015, 282, 1891-1905.	4.7	18

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37	Shell proteome of rhynchonelliform brachiopods. Journal of Structural Biology, 2015, 190, 360-366.	2.8	21
38	The test skeletal matrix of the black sea urchin Arbacia lixula. Comparative Biochemistry and Physiology Part D: Genomics and Proteomics, 2015, 13, 24-34.	1.0	4
39	Shell Extracts from the Marine Bivalve Pecten maximus Regulate the Synthesis of Extracellular Matrix in Primary Cultured Human Skin Fibroblasts. PLoS ONE, 2014, 9, e99931.	2.5	20
40	The Skeleton of the Staghorn Coral Acropora millepora: Molecular and Structural Characterization. PLoS ONE, 2014, 9, e97454.	2.5	38
41	Metazoan calcium carbonate biomineralizations: macroevolutionary trends â€“ challenges for the coming decade. Bulletin - Societie Geologique De France, 2014, 185, 217-232.	2.2	11
42	The evolution of metazoan Î±-carbonic anhydrases and their roles in calcium carbonate biomineralization. Frontiers in Zoology, 2014, 11, .	2.0	78
43	The shell organic matrix of the crossed lamellar queen conch shell (Strombus gigas). Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2014, 168, 76-85.	1.6	31
44	Genesis of amorphous calcium carbonate containing alveolar plates in the ciliate Coleps hirtus (Ciliophora, Prostomatea). Journal of Structural Biology, 2013, 181, 155-161.	2.8	10
45	The shellâ€forming proteome of <i><scp>L</scp>ottiaÂgigantea</i> reveals both deep conservations and lineageâ€specific novelties. FEBS Journal, 2013, 280, 214-232.	4.7	109
46	The Skeletal Proteome of the Coral Acropora millepora: The Evolution of Calcification by Co-Option and Domain Shuffling. Molecular Biology and Evolution, 2013, 30, 2099-2112.	8.9	155
47	Biomineralization toolkit: The importance of sample cleaning prior to the characterization of biomineral proteomes. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E2144-E2146.	7.1	30
48	Proteomics of CaCO₃biomineral-associated proteins: How to properly address their analysis. Proteomics, 2013, 13, 3109-3116.	2.2	26
49	Different secretory repertoires control the biomineralization processes of prism and nacre deposition of the pearl oyster shell. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 20986-20991.	7.1	287
50	Merging models of biomineralisation with concepts of nonclassical crystallisation: is a liquid amorphous precursor involved in the formation of the prismatic layer of the Mediterranean Fan Mussel Pinna nobilis?. Faraday Discussions, 2012, 159, 433.	3.2	50
51	The shell matrix of the pulmonate land snail Helix aspersa maxima. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2012, 161, 303-314.	1.6	30
52	The formation and mineralization of mollusk shell. Frontiers in Bioscience - Scholar, 2012, S4, 1099-1125.	2.1	311
53	Identification of Two Carbonic Anhydrases in the Mantle of the <scp>E</scp>uropean Abalone <i><scp>H</scp>aliotis tuberculata</i> (<scp>G</scp>astropoda, Haliotidae): Phylogenetic Implications. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2012, 318, 353-367.	1.3	30
54	Novel Molluskan Biomineralization Proteins Retrieved from Proteomics: A Case Study with Upsalin. ChemBioChem, 2012, 13, 1067-1078.	2.6	17

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55	Characterization of MRNP34, a novel methionine-rich nacre protein from the pearl oysters. Amino Acids, 2012, 42, 2009-2017.	2.7	28
56	Proteomic Strategy for Identifying Mollusc Shell Proteins Using Mild Chemical Degradation and Trypsin Digestion of Insoluble Organic Shell Matrix: A Pilot Study on Haliotis tuberculata. Marine Biotechnology, 2012, 14, 446-458.	2.4	22
57	Variability of shell repair in the Manila clam Ruditapes philippinarum affected by the Brown Ring Disease: A microstructural and biochemical study. Journal of Invertebrate Pathology, 2011, 106, 407-417.	3.2	13
58	Nautilinâ€•63, a novel acidic glycoprotein from the shell nacre of <i>Nautilusâ€ƒmacromphalus</i>. FEBS Journal, 2011, 278, 2117-2130.	4.7	26
59	Proteomic Identification of Novel Proteins from the Calcifying Shell Matrix of the Manila Clam Venerupis Philippinarum. Marine Biotechnology, 2011, 13, 955-962.	2.4	44
60	Novel Proteins from the Calcifying Shell Matrix of the Pacific Oyster Crassostrea gigas. Marine Biotechnology, 2011, 13, 1159-1168.	2.4	71
61	Molecular Evolution of Mollusc Shell Proteins: Insights from Proteomic Analysis of the Edible Mussel Mytilus. Journal of Molecular Evolution, 2011, 72, 531-546.	1.8	68
62	Acidic Shell Proteins of the Mediterranean Fan Mussel Pinna nobilis. Progress in Molecular and Subcellular Biology, 2011, 52, 353-395.	1.6	16
63	Clam shell repair from the brown ring disease: a study of the organic matrix using Confocal Raman micro-spectrometry and WDS microprobe. Analytical and Bioanalytical Chemistry, 2010, 396, 555-567.	3.7	17
64	Proteomic Analysis of the Acidâ€•Soluble Nacre Matrix of the Bivalve<i>Unio pictorum</i>: Detection of Novel Carbonic Anhydrase and Putative Protease Inhibitor Proteins. ChemBioChem, 2010, 11, 2138-2147.	2.6	36
65	Proteomic analysis of the organic matrix of the abalone Haliotis asinina calcified shell. Proteome Science, 2010, 8, 54.	1.7	119
66	Shell repair in the clam Ruditapes philippinarum, affected by the Brown Ring Disease (BRD): a biochemical and serological study. Materials Research Society Symposia Proceedings, 2009, 1187, 80.	0.1	2
67	Nacre Evolution : A Proteomic Approach. Materials Research Society Symposia Proceedings, 2009, 1187, 13.	0.1	5
68	Evolution of Nacre: Biochemistry and Proteomics of the Shell Organic Matrix of the Cephalopod <i>Nautilus macromphalus</i>. ChemBioChem, 2009, 10, 1495-1506.	2.6	66
69	Nacre Calcification in the Freshwater Mussel <i>Unio pictorum</i>: Carbonic Anhydrase Activity and Purification of a 95 kDa Calciumâ€•Binding Glycoprotein. ChemBioChem, 2008, 9, 2515-2523.	2.6	56
70	Shell matrices of Recent rhynchonelliform brachiopods: microstructures and glycosylation studies. Earth and Environmental Science Transactions of the Royal Society of Edinburgh, 2007, 98, 415-424.	0.3	14
71	Molluscan Shell Proteins: Primary Structure, Origin, and Evolution. Current Topics in Developmental Biology, 2007, 80, 209-276.	2.2	442
72	Protein mapping of calcium carbonate biominerals by immunogold. Biomaterials, 2007, 28, 2368-2377.	11.4	49

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73	The shell matrix of the freshwater mussel Unio pictorum (Paleoheterodonta, Unionoida). FEBS Journal, 2007, 274, 2933-2945.	4.7	90
74	Anisotropic lattice distortions in biogenic calcite induced by intra-crystalline organic molecules. Journal of Structural Biology, 2006, 155, 96-103.	2.8	171
75	Molluscan biomineralization: The proteinaceous shell constituents of Pinna nobilis L.. Materials Science and Engineering C, 2005, 25, 105-111.	7.3	61
76	Caspartin and Calprismin, Two Proteins of the Shell Calcitic Prisms of the Mediterranean Fan Mussel Pinna nobilis. Journal of Biological Chemistry, 2005, 280, 33895-33908.	3.4	129
77	Molluscan shell proteins. Comptes Rendus - Palevol, 2004, 3, 469-492.	0.2	303
78	Biomineralisations in crustaceans: storage strategies. Comptes Rendus - Palevol, 2004, 3, 515-534.	0.2	97
79	Phosphorylation of serine residues is fundamental for the calcium-binding ability of Orchestin, a soluble matrix protein from crustacean calcium storage structures. FEBS Letters, 2003, 535, 49-54.	2.8	61
80	Screening molluscan cDNA expression libraries with anti-shell matrix antibodies. Protein Expression and Purification, 2003, 30, 246-252.	1.3	20
81	Molluscan Shell Matrix Characterization by Preparative SDS-PAGE. Scientific World Journal, The, 2003, 3, 342-347.	2.1	11
82	Large-Scale Fractionation of Molluscan Shell Matrix. Protein Expression and Purification, 2001, 23, 175-179.	1.3	29
83	Soluble proteins of the nacre of the giant oyster Pinctada maxima and of the abalone Haliotis tuberculata:. Comparative Biochemistry and Physiology - B Biochemistry and Molecular Biology, 2001, 128, 389-400.	1.6	57
84	Mucins and Molluscan Calcification. Journal of Biological Chemistry, 2000, 275, 20667-20675.	3.4	175
85	A marriage of bone and nacre. Nature, 1998, 392, 861-862.	27.8	243
86	Synthesis of Calcium Carbonate Biological Materials: How Many Proteins are Needed?. Key Engineering Materials, 0, 614, 52-61.	0.4	7
87	Carbonic Anhydrase and Metazoan Biocalcification: A Focus on Molluscs. Key Engineering Materials, 0, 672, 151-157.	0.4	10
88	Characterization of the Teeth Skeletal Matrix from <i>Arbacia lixula</i>. Key Engineering Materials, 0, 672, 168-182.	0.4	0
89	Heavy Metals in Mollusc Shells: A Quick Method for their Detection. Key Engineering Materials, 0, 672, 340-345.	0.4	3