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	Molluscan Shell Proteins: Primary Structure, Origin, and Evolution. Current Topics in Developmental Biology, 2007, 80, 209-276.	2.2	442
2	The formation and mineralization of mollusk shell. Frontiers in Bioscience - Scholar, 2012, S4, 1099-1125.	2.1	311
3	Molluscan shell proteins. Comptes Rendus - Palevol, 2004, 3, 469-492.	0.2	303
4	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
5	A marriage of bone and nacre. Nature, 1998, 392, 861-862.	27.8	243
6	Mucins and Molluscan Calcification. Journal of Biological Chemistry, 2000, 275, 20667-20675.	3.4	175
7	Anisotropic lattice distortions in biogenic calcite induced by intra-crystalline organic molecules. Journal of Structural Biology, 2006, 155, 96-103.	2.8	171
8	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
9	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
10	Proteomic analysis of the organic matrix of the abalone Haliotis asinina calcified shell. Proteome Science, 2010, 8, 54.	1.7	119
11	The shellâ€forming proteome of <scp>L</scp>ottiaÂgigantea reveals both deep conservations and lineageâ€specific novelties. FEBS Journal, 2013, 280, 214-232.	4.7	109
12	Biomineralisations in crustaceans: storage strategies. Comptes Rendus - Palevol, 2004, 3, 515-534.	0.2	97
13	The shell matrix of the freshwater mussel Unio pictorum (Paleoheterodonta, Unionoida). FEBS Journal, 2007, 274, 2933-2945.	4.7	90
14	Biomineralization: Integrating mechanism and evolutionary history. Science Advances, 2022, 8, eabl9653.	10.3	86
15	The evolution of metazoan Î±-carbonic anhydrases and their roles in calcium carbonate biomineralization. Frontiers in Zoology, 2014, 11, .	2.0	78
16	Deep conservation of bivalve nacre proteins highlighted by shell matrix proteomics of the Unionoida Elliptio complanata and Villosa lienosa. Journal of the Royal Society Interface, 2017, 14, 20160846.	3.4	72
17	Novel Proteins from the Calcifying Shell Matrix of the Pacific Oyster Crassostrea gigas. Marine Biotechnology, 2011, 13, 1159-1168.	2.4	71
18	Nanoscale assembly processes revealed in the nacroprismatic transition zone of Pinna nobilis mollusc shells. Nature Communications, 2015, 6, 10097.	12.8	69

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19	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
20	Evolution of Nacre: Biochemistry and Proteomics of the Shell Organic Matrix of the Cephalopod Nautilus macromphalus. ChemBioChem, 2009, 10, 1495-1506.	2.6	66
21	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
22	Molluscan biomineralization: The proteinaceous shell constituents of Pinna nobilis L.. Materials Science and Engineering C, 2005, 25, 105-111.	7.3	61
23	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
24	Nacre Calcification in the Freshwater Mussel Unio pictorum: Carbonic Anhydrase Activity and Purification of a 95 kDa Calciumâ€Binding Glycoprotein. ChemBioChem, 2008, 9, 2515-2523.	2.6	56
25	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
26	Protein mapping of calcium carbonate biominerals by immunogold. Biomaterials, 2007, 28, 2368-2377.	11.4	49
27	Mollusc shellomes: Past, present and future. Journal of Structural Biology, 2020, 212, 107583.	2.8	45
28	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
29	Hydroxyl-rich macromolecules enable the bio-inspired synthesis of single crystal nanocomposites. Nature Communications, 2019, 10, 5682.	12.8	43
30	The Skeleton of the Staghorn Coral Acropora millepora: Molecular and Structural Characterization. PLoS ONE, 2014, 9, e97454.	2.5	38
31	Organic matrices in metazoan calcium carbonate skeletons: Composition, functions, evolution. Journal of Structural Biology, 2016, 196, 98-106.	2.8	38
32	Proteomic Analysis of the Acidâ€Soluble Nacre Matrix of the BivalveUnio pictorum: Detection of Novel Carbonic Anhydrase and Putative Protease Inhibitor Proteins. ChemBioChem, 2010, 11, 2138-2147.	2.6	36
33	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
34	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
35	Identification of Two Carbonic Anhydrases in the Mantle of the <scp>E</scp>uropean Abalone <scp>H</scp>aliotis tuberculata (<scp>G</scp>astropoda, Haliotidae): Phylogenetic Implications. Journal of Experimental Zoology Part B: Molecular and Developmental Evolution, 2012, 318, 353-367.	1.3	30
36	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

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37	The Shell of the Invasive Bivalve Species Dreissena polymorpha: Biochemical, Elemental and Textural Investigations. PLoS ONE, 2016, 11, e0154264.	2.5	30
38	Large-Scale Fractionation of Molluscan Shell Matrix. Protein Expression and Purification, 2001, 23, 175-179.	1.3	29
39	'Palaeoshellomicsâ€™ reveals the use of freshwater mother-of-pearl in prehistory. ELife, 2019, 8, .	6.0	29
40	Characterization of MRNP34, a novel methionine-rich nacre protein from the pearl oysters. Amino Acids, 2012, 42, 2009-2017.	2.7	28
41	Nautilinâ€63, a novel acidic glycoprotein from the shell nacre of Nautilusâ€ƒmacromphalus. FEBS Journal, 2011, 278, 2117-2130.	4.7	26
42	Proteomics of CaCO₃biomineral-associated proteins: How to properly address their analysis. Proteomics, 2013, 13, 3109-3116.	2.2	26
43	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
44	Molecular modularity and asymmetry of the molluscan mantle revealed by a gene expression atlas. GigaScience, 2018, 7, .	6.4	22
45	Shell proteome of rhynchonelliform brachiopods. Journal of Structural Biology, 2015, 190, 360-366.	2.8	21
46	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
47	Screening molluscan cDNA expression libraries with anti-shell matrix antibodies. Protein Expression and Purification, 2003, 30, 246-252.	1.3	20
48	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
49	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
50	Spine and test skeletal matrices of the Mediterranean sea urchin ArbaciaÂlixula â€“ a comparative characterization of their sugar signature. FEBS Journal, 2015, 282, 1891-1905.	4.7	18
51	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
52	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
53	Novel Molluskan Biomineralization Proteins Retrieved from Proteomics: A Case Study with Upsalin. ChemBioChem, 2012, 13, 1067-1078.	2.6	17
54	Chalky versus foliated: a discriminant immunogold labelling of shell microstructures in the edible oyster Crassostrea gigas. Marine Biology, 2016, 163, 1.	1.5	17

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55	Acidic Monosaccharides become Incorporated into Calcite Single Crystals**. Chemistry - A European Journal, 2020, 26, 16860-16868.	3.3	17
56	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
57	Acidic Shell Proteins of the Mediterranean Fan Mussel Pinna nobilis. Progress in Molecular and Subcellular Biology, 2011, 52, 353-395.	1.6	16
58	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
59	Inorganic phosphate in growing calcium carbonate abalone shell suggests a shared mineral ancestral precursor. Nature Communications, 2022, 13, 1496.	12.8	14
60	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
61	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
62	Molluscan Shell Matrix Characterization by Preparative SDS-PAGE. Scientific World Journal, The, 2003, 3, 342-347.	2.1	11
63	Metazoan calcium carbonate biomineralizations: macroevolutionary trends â€“ challenges for the coming decade. Bulletin - Societie Geologique De France, 2014, 185, 217-232.	2.2	11
64	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
65	Evolution and biomineralization of pteropod shells. Journal of Structural Biology, 2021, 213, 107779.	2.8	11
66	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
67	Carbonic Anhydrase and Metazoan Biocalcification: A Focus on Molluscs. Key Engineering Materials, 0, 672, 151-157.	0.4	10
68	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
69	A Natureâ€™s Curiosity: The Argonaut â€œShellâ€•and Its Organic Content. Crystals, 2020, 10, 839.	2.2	9
70	The shell matrix of the european thorny oyster, Spondylus gaederopus: microstructural and molecular characterization. Journal of Structural Biology, 2020, 211, 107497.	2.8	9
71	Skeletal Organic Matrices in Molluscs: Origin, Evolution, Diagenesis. , 2018, , 325-332.		8
72	Synthesis of Calcium Carbonate Biological Materials: How Many Proteins are Needed?. Key Engineering Materials, 0, 614, 52-61.	0.4	7

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73	Unveiling the Evolution of Bivalve Nacre Proteins by Shell Proteomics of Unionoidae. Key Engineering Materials, 2016, 672, 158-167.	0.4	6
74	Self-healing silk from the sea: role of helical hierarchical structure inPinna nobilisbyssus mechanics. Soft Matter, 2019, 15, 9654-9664.	2.7	6
75	Nacre Evolution : A Proteomic Approach. Materials Research Society Symposia Proceedings, 2009, 1187, 13.	0.1	5
76	In vivo enrichment of magnesium ions modifies sea urchin spicule properties. Bioinspired, Biomimetic and Nanobiomaterials, 2015, 4, 111-120.	0.9	5
77	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
78	Thermal Stability of Nacre Proteins of the Polynesian Pearl Oyster: A Proteomic Study. Key Engineering Materials, 2016, 672, 222-231.	0.4	4
79	Progressive changes in crystallographic textures of biominerals generate functionally graded ceramics. Materials Advances, 2022, 3, 1527-1538.	5.4	4
80	Proteins as Functional Units of Biocalcification â€“ An Overview. Key Engineering Materials, 2016, 672, 183-190.	0.4	3
81	Heavy Metals in Mollusc Shells: A Quick Method for their Detection. Key Engineering Materials, 0, 672, 340-345.	0.4	3
82	Pearl grafting: Tracking the biological origin of nuclei by straightforward immunological methods. Aquaculture Research, 2018, 49, 692-700.	1.8	3
83	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
84	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
85	Data Mining Approaches to Identify Biomineralization Related Sequences. Key Engineering Materials, 2016, 672, 191-214.	0.4	2
86	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
87	The role of organic matrices in biomineralization. Discover Materials, 2021, 1, 1.	2.8	1
88	Characterization of the Teeth Skeletal Matrix from <i>Arbacia lixula</i>. Key Engineering Materials, 0, 672, 168-182.	0.4	0
89	Biomineralix (COST Action TD0903), 2009-2014: An Overview. Key Engineering Materials, 2016, 672, 1-18.	0.4	0