Frank Melzner

List of Publications by Year
in descending order

78 papers	6,419 citations	87888 38 h-index	69250 77 g-index
81 all docs	81 docs citations	81 times ranked	4913 citing authors

#	Article	IF	Citations
1	The silent loss of cell physiology hampers marine biosciences. PLoS Biology, 2022, 20, e3001641.	5.6	5
2	Simultaneous recording of filtration and respiration in marine organisms in response to shortâ€term environmental variability. Limnology and Oceanography: Methods, 2021, 19, 196-209.	2.0	12
3	Decoupling salinity and carbonate chemistry: low calcium ion concentration rather than salinity limits calcification in Baltic Sea mussels. Biogeosciences, 2021, 18, 2573-2590.	3.3	10
4	Transcriptomic analysis of shell repair and biomineralization in the blue mussel, Mytilus edulis. BMC Genomics, 2021, 22, 437.	2.8	14
5	Salinity Driven Selection and Local Adaptation in Baltic Sea Mytilid Mussels. Frontiers in Marine Science, 2021, 8, .	2.5	8
6	Cyclic thermal fluctuations can be burden or relief for an ectotherm depending on fluctuationsâ€™ average and amplitude. Functional Ecology, 2021, 35, 2483-2496.	3.6	15
7	Comparative de novo assembly and annotation of mantle tissue transcriptomes from the Mytilus edulis species complex (M. edulis, M. galloprovincialis, M. trossulus). Marine Genomics, 2020, 51, 100700.	1.1	11
8	Ocean Acidification and Coastal Marine Invertebrates: Tracking CO₂Effects from Seawater to the Cell. Annual Review of Marine Science, 2020, 12, 499-523.	11.6	76
9	Deciphering mollusc shell production: the roles of genetic mechanisms through to ecology, aquaculture and biomimetics. Biological Reviews, 2020, 95, 1812-1837.	10.4	63
10	Ocean winter warming induced starvation of predator and prey. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20200970.	2.6	9
11	Intracellular pH regulation in mantle epithelial cells of the Pacific oyster, Crassostrea gigas. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2020, 190, 691-700.	1.5	12
12	Skeletal integrity of a marine keystone predator (Asterias rubens) threatened by ocean acidification. Journal of Experimental Marine Biology and Ecology, 2020, 526, 151335.	1.5	5
13	Expression of calcificationâ€related ion transporters during blue mussel larval development. Ecology and Evolution, 2019, 9, 7157-7172.	1.9	37
14	Proteomic investigation of the blue mussel larval shell organic matrix. Journal of Structural Biology, 2019, 208, 107385.	2.8	16
15	Transâ€life cycle acclimation to experimental ocean acidification affects gastric pH homeostasis and larval recruitment in the sea star <i>Asterias rubens</i>. Acta Physiologica, 2018, 224, e13075.	3.8	14
16	<i>In vivo</i> characterization of bivalve larval shells: a confocal Raman microscopy study. Journal of the Royal Society Interface, 2018, 15, 20170723.	3.4	22
17	High Calcification Costs Limit Mussel Growth at Low Salinity. Frontiers in Marine Science, 2018, 5, .	2.5	48
18	Calcification in a marginal sea â€“ influence of seawater [Ca²⁺] and carbonate chemistry on bivalve shell formation. Biogeosciences, 2018, 15, 1469-1482.	3.3	24

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19	The Baltic Sea as a time machine for the future coastal ocean. Science Advances, 2018, 4, eaar8195.	10.3	339
20	Combining hydrodynamic modelling with genetics: can passive larval drift shape the genetic structure of Baltic <i>Mytilus</i> populations?. Molecular Ecology, 2017, 26, 2765-2782.	3.9	56
21	Naturally acidified habitat selects for ocean acidificationâ€“tolerant mussels. Science Advances, 2017, 3, e1602411.	10.3	115
22	Intra-population variability of ocean acidification impacts on the physiology of Baltic blue mussels (Mytilus edulis): integrating tissue and organism response. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2017, 187, 529-543.	1.5	21
23	Mussel larvae modify calcifying fluid carbonate chemistry to promote calcification. Nature Communications, 2017, 8, 1709.	12.8	78
24	Ammonium excretion and oxygen respiration of tropical copepods and euphausiids exposed to oxygen minimum zone conditions. Biogeosciences, 2016, 13, 2241-2255.	3.3	37
25	Water column biogeochemistry of oxygen minimum zones in the eastern tropical North Atlantic and eastern tropical South Pacific oceans. Biogeosciences, 2016, 13, 3585-3606.	3.3	27
26	Simulated leakage of high pCO2 water negatively impacts bivalve dominated infaunal communities from the Western Baltic Sea. Scientific Reports, 2016, 6, 31447.	3.3	21
27	Elevated pCO2 drives lower growth and yet increased calcification in the early life history of the cuttlefish Sepia officinalis (Mollusca: Cephalopoda). ICES Journal of Marine Science, 2016, 73, 970-980.	2.5	21
28	A shell regeneration assay to identify biomineralization candidate genes in mytilid mussels. Marine Genomics, 2016, 27, 57-67.	1.1	46
29	Biophysical and Population Genetic Models Predict the Presence of â€œPhantomâ€•Stepping Stones Connecting Mid-Atlantic Ridge Vent Ecosystems. Current Biology, 2016, 26, 2257-2267.	3.9	69
30	Using the critical salinity (S crit) concept to predict invasion potential of the anemone Diadumene lineata in the Baltic Sea. Marine Biology, 2016, 163, 1.	1.5	24
31	Calcium mobilisation following shell damage in the Pacific oyster, Crassostrea gigas. Marine Genomics, 2016, 27, 75-83.	1.1	28
32	Impact of seawater carbonate chemistry on the calcification of marine bivalves. Biogeosciences, 2015, 12, 4209-4220.	3.3	93
33	Nutrient utilisation and weathering inputs in the Peruvian upwelling region since the Little Ice Age. Climate of the Past, 2015, 11, 187-202.	3.4	10
34	Symposium on â€œClimate Change and Molluscan Ecophysiologyâ€•at the 79thAnnual Meeting of the American Malacological Society. American Malacological Bulletin, 2015, 33, 121-126.	0.2	0
35	Salinity dependence of recruitment success of the sea star Asterias rubens in the brackish western Baltic Sea. Helgoland Marine Research, 2015, 69, 169-175.	1.3	16
36	The squat lobster Pleuroncodes monodon tolerates anoxic â€œdead zoneâ€•conditions off Peru. Marine Biology, 2015, 162, 1913-1921.	1.5	24

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37	A sea urchin Na+K+2Clâˆ’ cotransporter is involved in the maintenance of calcification-relevant cytoplasmic cords in Strongylocentrotus droebachiensis larvae. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2015, 187, 184-192.	1.8	6
38	Establishing Functional Relationships between Abiotic Environment, Macrophyte Coverage, Resource Gradients and the Distribution of Mytilus trossulus in a Brackish Non-Tidal Environment. PLoS ONE, 2015, 10, e0136949.	2.5	16
39	Juvenile sea stars exposed to acidification decrease feeding and growth with no acclimation potential. Marine Ecology - Progress Series, 2014, 509, 227-239.	1.9	30
40	Ocean acidification and temperature rise: effects on calcification during early development of the cuttlefish Sepia officinalis. Marine Biology, 2013, 160, 2007-2022.	1.5	45
41	Future ocean acidification will be amplified by hypoxia in coastal habitats. Marine Biology, 2013, 160, 1875-1888.	1.5	423
42	Impacts of seawater acidification on mantle gene expression patterns of the Baltic Sea blue mussel: implications for shell formation and energy metabolism. Marine Biology, 2013, 160, 1845-1861.	1.5	134
43	Long-term and trans-life-cycle effects of exposure to ocean acidification in the green sea urchin Strongylocentrotus droebachiensis. Marine Biology, 2013, 160, 1835-1843.	1.5	266
44	CO2-driven seawater acidification differentially affects development and molecular plasticity along life history of fish (Oryzias latipes). Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2013, 165, 119-130.	1.8	71
45	Digestion in sea urchin larvae impaired under ocean acidification. Nature Climate Change, 2013, 3, 1044-1049.	18.8	126
46	Food availability outweighs ocean acidification effects in juvenile <i><scp>M</scp>ytilus edulis</i>: laboratory and field experiments. Global Change Biology, 2013, 19, 1017-1027.	9.5	379
47	Maintenance of coelomic fluid pH in sea urchins exposed to elevated CO2: the role of body cavity epithelia and stereom dissolution. Marine Biology, 2013, 160, 2631-2645.	1.5	38
48	Acidified seawater impacts sea urchin larvae pH regulatory systems relevant for calcification. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 18192-18197.	7.1	217
49	Resource allocation and extracellular acidâ€“base status in the sea urchin Strongylocentrotus droebachiensis in response to CO2 induced seawater acidification. Aquatic Toxicology, 2012, 110-111, 194-207.	4.0	172
50	Conditions of <i>Mytilus edulis</i> extracellular body fluids and shell composition in a pHâ€treatment experiment: Acidâ€base status, trace elements and <i>Î´</i>¹¹B. Geochemistry, Geophysics, Geosystems, 2012, 13, .	2.5	48
51	Multiple Loci Are Associated with Dilated Cardiomyopathy in Irish Wolfhounds. PLoS ONE, 2012, 7, e36691.	2.5	37
52	Mussels with Meat: Bivalve Tissue-Shell Radiocarbon Age Differences and Archaeological Implications. Radiocarbon, 2012, 54, 953-965.	1.8	24
53	Contribution of changes in opal productivity and nutrient distribution in the coastal upwelling systems to Late Pliocene/Early Pleistocene climate cooling. Climate of the Past, 2012, 8, 1435-1445.	3.4	21
54	Influence of Temperature, Hypercapnia, and Development on the Relative Expression of Different Hemocyanin Isoforms in the Common Cuttlefish <i>Sepia officinalis</i>. Journal of Experimental Zoology, 2012, 317, 511-523.	1.2	21

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55	Massively Parallel RNA Sequencing Identifies a Complex Immune Gene Repertoire in the lophotrochozoan Mytilus edulis. PLoS ONE, 2012, 7, e33091.	2.5	133
56	Sour times: seawater acidification effects on growth, feeding behaviour and acidâ€“base status of Asterias rubens and Carcinus maenas. Marine Ecology - Progress Series, 2012, 459, 85-98.	1.9	94
57	Elevated seawater Pco2 differentially affects branchial acid-base transporters over the course of development in the cephalopod Sepia officinalis. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 300, R1100-R1114.	1.8	67
58	CO2 induced seawater acidification impacts sea urchin larval development I: Elevated metabolic rates decrease scope for growth and induce developmental delay. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2011, 160, 331-340.	1.8	275
59	CO2 induced seawater acidification impacts sea urchin larval development II: Gene expression patterns in pluteus larvae. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2011, 160, 320-330.	1.8	123
60	Effects of elevated seawater p CO2 on gene expression patterns in the gills of the green crab, Carcinus maenas. BMC Genomics, 2011, 12, 488.	2.8	46
61	New insights into ion regulation of cephalopod molluscs: a role of epidermal ionocytes in acid-base regulation during embryogenesis. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 301, R1700-R1709.	1.8	27
62	Food Supply and Seawater pCO2 Impact Calcification and Internal Shell Dissolution in the Blue Mussel Mytilus edulis. PLoS ONE, 2011, 6, e24223.	2.5	319
63	Cuttlebone calcification increases during exposure to elevated seawater pCO2 in the cephalopod Sepia officinalis. Marine Biology, 2010, 157, 1653-1663.	1.5	89
64	Moderate seawater acidification does not elicit long-term metabolic depression in the blue mussel Mytilus edulis. Marine Biology, 2010, 157, 2667-2676.	1.5	257
65	Acidâ€“base regulatory ability of the cephalopod (Sepia officinalis) in response to environmental hypercapnia. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2010, 180, 323-335.	1.5	102
66	Localization of ion-regulatory epithelia in embryos and hatchlings of two cephalopods. Cell and Tissue Research, 2010, 339, 571-583.	2.9	32
67	Calcifying invertebrates succeed in a naturally CO₂-rich coastal habitat but are threatened by high levels of future acidification. Biogeosciences, 2010, 7, 3879-3891.	3.3	301
68	Physiological basis for high CO₂ tolerance in marine ectothermic animals: pre-adaptation through lifestyle and ontogeny?. Biogeosciences, 2009, 6, 2313-2331.	3.3	544
69	Abiotic conditions in cephalopod (Sepia officinalis) eggs: embryonic development at low pH and high pCO2. Marine Biology, 2009, 156, 515-519.	1.5	67
70	Swimming performance in Atlantic Cod (Gadus morhua) following long-term (4â€“12 months) acclimation to elevated seawater PCO2. Aquatic Toxicology, 2009, 92, 30-37.	4.0	136
71	Growth and calcification in the cephalopod Sepia officinalis under elevated seawater pCO2. Marine Ecology - Progress Series, 2008, 373, 303-309.	1.9	113
72	Role of blood-oxygen transport in thermal tolerance of the cuttlefish, Sepia officinalis. Integrative and Comparative Biology, 2007, 47, 645-655.	2.0	46

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73	Allometry of thermal limitation in the cephalopod Sepia officinalis. Comparative Biochemistry and Physiology Part A, Molecular & Integrative Physiology, 2007, 146, 149-154.	1.8	20
74	Critical temperatures in the cephalopod Sepia officinalisinvestigated using in vivo31P NMR spectroscopy. Journal of Experimental Biology, 2006, 209, 891-906.	1.7	45
75	Temperature-dependent oxygen extraction from the ventilatory current and the costs of ventilation in the cephalopod Sepia officinalis. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2006, 176, 607-621.	1.5	37
76	Coordination between ventilatory pressure oscillations and venous return in the cephalopod Sepia officinalis under control conditions, spontaneous exercise and recovery. Journal of Comparative Physiology B: Biochemical, Systemic, and Environmental Physiology, 2006, 177, 1-17.	1.5	9
77	Estimating recent growth in the cuttlefish Sepia officinalis: are nucleic acid-based indicators for growth and condition the method of choice?. Journal of Experimental Marine Biology and Ecology, 2005, 317, 37-51.	1.5	16
78	Capacity for Cellular Osmoregulation Defines Critical Salinity of Marine Invertebrates at Low Salinity. Frontiers in Marine Science, 0, 9, .	2.5	9