Alejandro Buschmann

List of Publications by Year
in descending order

130 papers	10,473 citations	50170 46 h-index	34900 98 g-index
136 all docs	136 docs citations	136 times ranked	7282 citing authors

#	Article	IF	Citations
1	A 20-year retrospective review of global aquaculture. Nature, 2021, 591, 551-563.	13.7	871
2	Integrated aquaculture: rationale, evolution and state of the art emphasizing seaweed biofiltration in modern mariculture. Aquaculture, 2004, 231, 361-391.	1.7	773
3	Antimicrobial use in aquaculture reâ€examined: its relevance to antimicrobial resistance and to animal and human health. Environmental Microbiology, 2013, 15, 1917-1942.	1.8	607
4	INTEGRATING SEAWEEDS INTO MARINE AQUACULTURE SYSTEMS: A KEY TOWARD SUSTAINABILITY. Journal of Phycology, 2001, 37, 975-986.	1.0	583
5	Global patterns of kelp forest change over the past half-century. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 13785-13790.	3.3	511
6	Ecological engineering in aquaculture â€" Potential for integrated multi-trophic aquaculture (IMTA) in marine offshore systems. Aquaculture, 2009, 297, 1-9.	1.7	457
7	Seaweed production: overview of the global state of exploitation, farming and emerging research activity. European Journal of Phycology, 2017, 52, 391-406.	0.9	453
8	Integrated mariculture: asking the right questions. Aquaculture, 2003, 226, 69-90.	1.7	352
9	Aquaculture as yet another environmental gateway to the development and globalisation of antimicrobial resistance. Lancet Infectious Diseases, The, 2016, 16, e127-e133.	4.6	319
10	IMTA with Gracilaria vermiculophylla: Productivity and nutrient removal performance of the seaweed in a land-based pilot scale system. Aquaculture, 2011, 312, 77-87.	1.7	248
11	Integrated marine cultivation of Gracilaria chilensis (Gracilariales, Rhodophyta) and salmon cages for reduced environmental impact and increased economic output. Aquaculture, 1997, 156, 45-61.	1.7	231
12	Prospects and challenges for industrial production of seaweed bioactives. Journal of Phycology, 2015, 51, 821-837.	1.0	197
13	A review of the impacts of salmonid farming on marine coastal ecosystems in the southeast Pacific. ICES Journal of Marine Science, 2006, 63, 1338-1345.	1.2	194
14	Red algal farming in Chile: a review. Aquaculture, 2001, 194, 203-220.	1.7	169
15	Salmon aquaculture and coastal ecosystem health in Chile: Analysis of regulations, environmental impacts and bioremediation systems. Ocean and Coastal Management, 2009, 52, 243-249.	2.0	164
16	Salmon Aquaculture and Antimicrobial Resistance in the Marine Environment. PLoS ONE, 2012, 7, e42724.	1.1	154
17	Title is missing!. Journal of Applied Phycology, 1999, 11, 89-97.	1.5	150
18	Unpacking factors influencing antimicrobial use in global aquaculture and their implication for management: a review from a systems perspective. Sustainability Science, 2018, 13, 1105-1120.	2.5	147

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19	Antimicrobial resistance and antimicrobial resistance genes in marine bacteria from salmon aquaculture and nonâ€aquaculture sites. Environmental Microbiology, 2014, 16, 1310-1320.	1.8	136
20	Traditional vs. Integrated Multi-Trophic Aquaculture of Gracilaria chilensis C. J. Bird, J. McLachlan & E. C. Oliveira: Productivity and physiological performance. Aquaculture, 2009, 293, 211-220.	1.7	130
21	Toward a Coordinated Global Observing System for Seagrasses and Marine Macroalgae. Frontiers in Marine Science, 2019, 6, .	1.2	123
22	The effect of water movement, temperature and salinity on abundance and reproductive patterns of Macrocystis spp. (Phaeophyta) at different latitudes in Chile. Marine Biology, 2004, 145, 849-862.	0.7	118
23	PRESENCE OF SPOROPHYLLS IN FLOATING KELP RAFTS OF MACROCYSTIS SPP. (PHAEOPHYCEAE) ALONG THE CHILEAN PACIFIC COAST1.. Journal of Phycology, 2005, 41, 913-922.	1.0	107
24	Integrated tank cultivation of salmonids and Gracilaria chilensis (Gracilariales, Rhodophyta). Hydrobiologia, 1996, 326-327, 75-82.	1.0	102
25	Opportunities and challenges for the development of an integrated seaweed-based aquaculture activity in Chile: determining the physiological capabilities of Macrocystis and Gracilaria as biofilters. Journal of Applied Phycology, 2008, 20, 571-577.	1.5	98
26	Antimicrobial resistance genes in marine bacteria and human uropathogenic <scp>E</scp>scherichia coli from a region of intensive aquaculture. Environmental Microbiology Reports, 2015, 7, 803-809.	1.0	96
27	Gracilaria chilensis outdoor tank cultivation in Chile: Use of land-based salmon culture effluents. Aquacultural Engineering, 1994, 13, 283-300.	1.4	95
28	Identification and efficient extraction method of phlorotannins from the brown seaweed Macrocystis pyrifera using an orthogonal experimental design. Algal Research, 2016, 16, 201-208.	2.4	92
29	Cultivation of Gracilaria on the sea-bottom in southern Chile: a review. Journal of Applied Phycology, 1995, 7, 291-301.	1.5	91
30	Multitrophic Integration for Sustainable Marine Aquaculture. , 2008, , 2463-2475.		84
31	The Need for a Balanced Ecosystem Approach to Blue Revolution Aquaculture. Environment, 2007, 49, 36-43.	0.8	83
32	Intertidal macroalgae as refuge and food for amphipoda in Central Chile. Aquatic Botany, 1990, 36, 237-245.	0.8	80
33	Interaction mechanisms between Gracilaria chilensis (Rhodophyta) and epiphytes. Hydrobiologia, 1993, 260-261, 345-351.	1.0	80
34	Nitrogen uptake responses of Gracilaria vermiculophylla (Ohmi) Papenfuss under combined and single addition of nitrate and ammonium. Journal of Experimental Marine Biology and Ecology, 2011, 407, 190-199.	0.7	80
35	A review of the environmental effects and alternative production strategies of marine aquaculture in Chile. Aquacultural Engineering, 1996, 15, 397-421.	1.4	74
36	Seaweed future cultivation in Chile: perspectives and challenges. International Journal of Environment and Pollution, 2008, 33, 432.	0.2	74

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37	Long Term Variability in the Structure of Kelp Communities in Northern Chile and the 1997â€“98 ENSO. Journal of Applied Phycology, 2006, 18, 505-519.	1.5	69
38	A Functional Perspective Analysis of Macroalgae and Epiphytic Bacterial Community Interaction. Frontiers in Microbiology, 2017, 8, 2561.	1.5	65
39	Perspectives on domestication research for sustainable seaweed aquaculture. Perspectives in Phycology, 2017, 4, 33-46.	1.9	64
40	Population biology of the subtidal kelps Macrocystis integrifolia and Lessonia trabeculata (Laminariales, Phaeophyceae) in an upwelling ecosystem of northern Chile: interannual variability and El NiÃ±o 1997-1998. Revista Chilena De Historia Natural, 2005, 78, 33.	0.5	61
41	Farming of the Giant Kelp Macrocystis Pyrifera in Southern Chile for Development of Novel Food Products. Journal of Applied Phycology, 2006, 18, 259-267.	1.5	61
42	Abundance, effects and management of epiphytism in intertidal cultures of Gracilaria (Rhodophyta) in southern Chile. Aquaculture, 1991, 92, 7-19.	1.7	59
43	The Status of Kelp Exploitation and Marine Agronomy, with Emphasis on Macrocystis pyrifera, in Chile. Advances in Botanical Research, 2014, , 161-188.	0.5	58
44	Bioremediation potential, growth and biomass yield of the green seaweed, UlvaÂlactuca in an integrated marine aquaculture system at the Red Sea coast of Saudi Arabia at different stocking densities and effluent flow rates. Reviews in Aquaculture, 2015, 7, 161-171.	4.6	53
45	Reproduction strategies of Macrocystis pyrifera (Phaeophyta) in Southern Chile: The importance of population dynamics. Journal of Applied Phycology, 2006, 18, 575-582.	1.5	52
46	Comparison of Spore Inoculated and Vegetative Propagated Cultivation Methods of Gracilaria chilensis in an Integrated Seaweed and Fish Cage Culture. Aquaculture International, 2005, 13, 409-422.	1.1	51
47	Micrograzers and spore release in Iridaea laminarioides Bory (Rhodophyta: Gigartinales). Journal of Experimental Marine Biology and Ecology, 1987, 108, 171-179.	0.7	49
48	Plasmid-Mediated Quinolone Resistance (PMQR) Genes and Class 1 Integrons in Quinolone-Resistant Marine Bacteria and Clinical Isolates of Escherichia coli from an Aquacultural Area. Microbial Ecology, 2018, 75, 104-112.	1.4	47
49	Macromolecular Antioxidants and Dietary Fiber in Edible Seaweeds. Journal of Food Science, 2017, 82, 289-295.	1.5	46
50	Germplasm banking of the giant kelp: Our biological insurance in a changing environment. Algal Research, 2016, 13, 134-140.	2.4	43
51	Overview of 3Âyear precommercial seafarming of MacrocystisÂpyrifera along the Chilean coast. Reviews in Aquaculture, 2018, 10, 543-559.	4.6	42
52	Scaling up bioethanol production from the farmed brown macroalga Macrocystis pyrifera in Chile. Biofuels, Bioproducts and Biorefining, 2016, 10, 673-685.	1.9	40
53	Varying reproductive success under ocean warming and acidification across giant kelp (Macrocystis) Tj ETQq1 1 0.784314 rgBT /Over	0.7	39
54	Can giant kelp (Macrocystis pyrifera) forests enhance invertebrate recruitment in southern Chile?. Marine Biology Research, 2012, 8, 855-864.	0.3	36

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55	Predator control of marine communities increases with temperature across 115 degrees of latitude. Science, 2022, 376, 1215-1219.	6.0	36
56	Insights into the diversity and metabolic function of bacterial communities in sediments from Chilean salmon aquaculture sites. Annals of Microbiology, 2018, 68, 63-77.	1.1	34
57	Experiments on an integrated aquaculture system (seaweeds and marine fish) on the Red Sea coast of Saudi Arabia: efficiency comparison of two local seaweed species for nutrient biofiltration and production. Reviews in Aquaculture, 2012, 4, 21-31.	4.6	33
58	Experimental indoor cultivation of the carrageenophytic red alga Gigartina skottsbergii. Aquaculture, 2004, 241, 357-370.	1.7	32
59	Production and economic assessment of giant kelpMacrocystis pyriferacultivation for abalone feed in the south of Chile. Aquaculture Research, 2016, 47, 698-707.	0.9	32
60	Macrocystis pyrifera aquafarming: Production optimization of rope-seeded juvenile sporophytes. Aquaculture, 2017, 468, 107-114.	1.7	32
61	Assessment of genetic and phenotypic diversity of the giant kelp, Macrocystis pyrifera, to support breeding programs. Algal Research, 2018, 30, 101-112.	2.4	32
62	Revisiting the economic profitability of giant kelp Macrocystis pyrifera (Ochrophyta) cultivation in Chile. Aquaculture, 2019, 502, 80-86.	1.7	32
63	Ecophysiological plasticity of annual populations of giant kelp (Macrocystis pyrifera) in a seasonally variable coastal environment in the Northern Patagonian Inner Seas of Southern Chile. Journal of Applied Phycology, 2014, 26, 837-847.	1.5	31
64	Farming the Ocean â€“ Seaweeds as a Quick Fix for the Climate?. Reviews in Fisheries Science and Aquaculture, 2023, 31, 285-295.	5.1	31
65	Light acclimation strategies of three commercially important red algal species. Aquaculture, 2010, 299, 140-148.	1.7	30
66	INTERTIDAL AMPHIPODS AS POTENTIAL DISPERSAL AGENTS OF CARPOSPORES OF IRIDAEA LAMINARIOIDES (GIGARTINALES, RHODOPHYTA)1. Journal of Phycology, 1990, 26, 417-420.	1.0	29
67	Uso inadecuado y excesivo de antibiÃ³ticos: Salud pÃºblica y salmonicultura en Chile. Revista Medica De Chile, 2011, 139, 107-118.	0.1	29
68	Title is missing!. Journal of Applied Phycology, 2001, 13, 253-265.	1.5	28
69	Mariculture Waste Management. , 2008, , 2211-2217.		28
70	Intertidal Gracilaria farming in southern Chile: differences of the algal proveniance. Aquatic Botany, 1992, 42, 327-337.	0.8	27
71	Photosynthesis and nitrogen uptake of the giant kelp Macrocystis pyrifera (Ochrophyta) grown close to salmon farms. Marine Environmental Research, 2018, 135, 93-102.	1.1	27
72	Structure of the epiphytic bacterial communities of Macrocystis pyrifera in localities with contrasting nitrogen concentrations and temperature. Algal Research, 2019, 44, 101706.	2.4	26

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73	Determinants of disease expression and survival of infected individual fronds in wild populations of Mazzaella laminarioides (Rhodophyta) in central and southern Chile. Marine Ecology - Progress Series, 1997, 154, 269-280.	0.9	26
74	Resistencia a los antimicrobianos en Chile y el paradigma de Una Salud: manejando los riesgos para la salud pÃºblica humana y animal resultante del uso de antimicrobianos en la acuicultura del salmÃ³n y en medicina. Revista Chilena De Infectologia, 2018, 35, 299-308.	0.0	25
75	The aquaculture supply chain in the time of covid-19 pandemic: Vulnerability, resilience, solutions and priorities at the global scale. Environmental Science and Policy, 2022, 127, 98-110.	2.4	25
76	The role of herbivory and desiccation on early successional patterns of intertidal macroalgae in southern Chile. Journal of Experimental Marine Biology and Ecology, 1990, 139, 221-230.	0.7	24
77	Title is missing!. Hydrobiologia, 1999, 398/399, 427-434.	1.0	24
78	An introduction to farming and biomass utilisation of marine macroalgae. Phycologia, 2019, 58, 443-445.	0.6	24
79	The Synergistic Impacts of Anthropogenic Stressors and COVID-19 on Aquaculture: A Current Global Perspective. Reviews in Fisheries Science and Aquaculture, 2022, 30, 123-135.	5.1	24
80	Agar yield and quality of Gracilaria chilensis (Gigartinales, Rhodophyta) in tank culture using fish effluents. Hydrobiologia, 1996, 326-327, 341-345.	1.0	23
81	GRAZING ON GIANT KELP MICROSCOPIC PHASES AND THE RECRUITMENT SUCCESS OF ANNUAL POPULATIONS OF MACROCYSTIS PYRIFERA (LAMINARIALES, PHAEOPHYTA) IN SOUTHERN CHILE1. Journal of Phycology, 2011, 47, 252-258.	1.0	23
82	Title is missing!. Journal of Applied Phycology, 1999, 11, 315-327.	1.5	22
83	Ceramialean epiphytism in an intertidal Gracilaria chilensis (Rhodophyta) bed in southern Chile. Journal of Applied Phycology, 1997, 9, 129-135.	1.5	21
84	Effect of environmental history on the habitat-forming kelp Macrocystis pyrifera responses to ocean acidification and warming: a physiological and molecular approach. Scientific Reports, 2021, 11, 2510.	1.6	20
85	Variability in per capita oogonia and sporophyte production from giant kelp gametophytes (Macrocystis pyrifera, Phaeophyceae). Revista Chilena De Historia Natural, 2004, 77, .	0.5	20
86	Vegetative propagation of the carrageenophytic red alga Gigartina skottsbergii Setchell et Gardner: Indoor and field experiments. Aquaculture, 2007, 262, 120-128.	1.7	19
87	INFECTIOUS DISEASES OF MAZZAELLA LAMINARIOIDES (RHODOPHYTA): CHANGES IN INFECTION PREVALENCE AND DISEASE EXPRESSION ASSOCIATED WITH SEASON, LOCALITY, AND WITHIN-SITE LOCATION1. Journal of Phycology, 1997, 33, 344-352.	1.0	18
88	Un anÃ¡lisis crÃ‡tico sobre el uso de macroalgas como base para una acuicultura sustentable. Revista Chilena De Historia Natural, 2013, 86, 251-264.	0.5	17
89	Amphipod Food Preference and Iridaeaspp. (Rhodophyta) Spore Release and Dispersal. Journal of the Marine Biological Association of the United Kingdom, 1991, 71, 891-897.	0.4	15
90	EFFECT OF ROCKY INTERTIDAL AMPHIPODS ON ALGAL RECRUITMENT: A FIELD STUDY1. Journal of Phycology, 1993, 29, 154-159.	1.0	15

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91	A pilot-scale study of the vegetative propagation and suspended cultivation of the carrageenophyte alga Gigartina skottsbergii in southern Chile. Journal of Applied Phycology, 2012, 24, 11-20.	1.5	15
92	Hydrothermal synthesis, characterization and seed germination effects of greenâ€emitting graphene oxideâ€carbon dot composite using brown macroalgal bioâ€oil as precursor. Journal of Chemical Technology and Biotechnology, 2019, 94, 3269-3275.	1.6	15
93	Intertidal cultivation of Gracilaria chilensis (Rhodophyta) in southern Chile: long term invertebrate abundance patterns. Aquaculture, 1997, 156, 269-278.	1.7	13
94	The ecological importance of Macrocystis pyrifera (Phaeophyta) forests towards a sustainable management and exploitation of Chilean coastal benthic co-management areas. International Journal of Environment and Sustainable Development, 2013, 12, 341.	0.2	13
95	Effects of light, temperature and stocking density on Halopteris scoparia growth. Journal of Applied Phycology, 2017, 29, 405-411.	1.5	13
96	Evaluation of artificial intertidal enclosures for Gracilaria farming in southern Chile. Aquacultural Engineering, 1992, 11, 203-216.	1.4	12
97	Evaluation of repopulation techniques for the giant kelp Macrocystis pyrifera (Laminariales). Botanica Marina, 2014, 57, 123-130.	0.6	12
98	Analyzing redox balance in a synthetic yeast platform to improve utilization of brown macroalgae as feedstock. Metabolic Engineering Communications, 2015, 2, 76-84.	1.9	12
99	The seaweed resources of Chile over the period 2006â€“2016: moving from gatherers to cultivators. Botanica Marina, 2019, 62, 237-247.	0.6	12
100	Use of the axial dispersion model to describe the O3and O3â€Š/H2O2advanced oxidation of alachlor in water. Journal of Chemical Technology and Biotechnology, 2002, 77, 584-592.	1.6	11
101	Nutrients, but not genetic diversity, affect Gracilaria chilensis (Rhodophyta) farming productivity and physiological responses. Journal of Phycology, 2018, 54, 860-869.	1.0	11
102	Production of Bioethanol From Brown Algae. , 2019, , 69-88.		11
103	Gracilaria-Mytilus interaction on a commercial algal farm in Chile. Hydrobiologia, 1996, 326-327, 355-359.	1.0	10
104	Population dynamics and culture studies of the edible red alga Callophyllis variegata (Kallymeniaceae). Phycological Research, 2010, 58, 108-115.	0.8	10
105	Integrated tank cultivation of salmonids and Gracilaria chilensis (Gracilariales, Rhodophyta). , 1996, , 75-82.		10
106	Concise reviews of seaweeds of current and future commercial interest. Journal of Applied Phycology, 2020, 32, 1-2.	1.5	9
107	Interaction mechanisms between Gracilaria chilensis (Rhodophyta) and epiphytes. , 1993, , 345-351.		8
108	Challenges for Future Salmonid Farming. , 2019, , 313-319.		6

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109	Effect of temperature variation in Agarophyton chilensis: contrasting the response of natural and farmed populations. Journal of Applied Phycology, 2019, 31, 2709-2717.	1.5	5
110	A mesocosm study on bacteriaâ€kelp interactions: Importance of nitrogen availability and kelp genetics. Journal of Phycology, 2021, 57, 1777-1791.	1.0	5
111	Recent advances in the understanding of the biological basis for Gigartina skottsbergii (Rhodophyta) cultivation in Chile. , 1999, , 427-434.		5
112	Enhancing yield on Macrocystis pyrifera (Ochrophyta): The effect of gametophytic developmental strategy. Algal Research, 2020, 52, 102124.	2.4	4
113	Physiological stress modulates epiphyte (Rhizoclonium sp.)-basiphyte (Agarophyton chilense) interaction in co-culture under different light regimes. Journal of Applied Phycology, 2020, 32, 3219-3232.	1.5	4
114	A systematic evidence map of conservation knowledge in Chilean Patagonia. Conservation Science and Practice, 2022, 4, e575.	0.9	4
115	Better off alone? Compared performance of monoclonal and polyclonal stands of a cultivated red alga growth. Evolutionary Applications, 2020, 13, 905-917.	1.5	3
116	Solar Radiation as an Isolated Environmental Factor in an Experimental Mesocosm Approach for Studying Photosynthetic Acclimation of Macrocystis pyrifera (Ochrophyta). Frontiers in Plant Science, 2021, 12, 622150.	1.7	3
117	Farming of the giant kelp Macrocystis pyrifera in southern Chile for development of novel food products. , 2006, , 33-41.		3
118	Influence of sedimentation in the absence of macrograzers on recruitment of an annual population of Macrocystis pyrifera in Metri Bay, Chile. Austral Ecology, 2017, 42, 783-789.	0.7	2
119	The 22nd International Seaweed Symposium: Academia meets industry. Journal of Applied Phycology, 2017, 29, 2155-2158.	1.5	2
120	Agar yield and quality of Gracilaria chilensis (Gigartinales, Rhodophyta) in tank culture using fish effluents. , 1996, , 341-345.		2
121	Reproduction strategies of Macrocystis pyrifera (Phaeophyta) in Southern Chile: The importance of population dynamics. , 2006, , 349-356.		1
122	Opportunities and challenges for the development of an integrated seaweed-based aquaculture activity in Chile: determining the physiological capabilities of Macrocystis and Gracilaria as biofilters. , 2007, , 121-127.		1
123	Coexistence in a subtidal habitat in southern Chile: the effects of giant kelpMacrocystis pyriferaovergrowth on the slipper limpetCrepipatella fecunda. Journal of the Marine Biological Association of the United Kingdom, 2015, 95, 25-33.	0.4	1
124	ResÃºmenes en extenso. Revista Bio Ciencias, 0, 8, .	0.1	1
125	First report of the intentionally introduced kelp, Saccharina japonica, in the Pacific coast of southern Chile. Algal Research, 2022, 65, 102750.	2.4	1
126	Gracilaria-Mytilus interaction on a commercial algal farm in Chile. , 1996, , 355-359.		0

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127	MINI-SYMPOSIUM ON PHOTOBIOLOGY. Revista Chilena De Historia Natural, 2001, 74, .	0.5	0
128	The Role Of Seaweeds For Sustainable Aquaculture Development. , 2018, , .		0
129	Long term variability in the structure of kelp communities in northern Chile and the 1997â€“98 ENSO. , 2006, , 279-293.		0
130	LeiX. G.,2021. Seaweed and Microalgae as Alternative Sources of Protein. Burleigh Dodds Series in Agricultural Sciences, Volume 107. Burleigh Dodds Science Publisher, Sawston, Cambridge, UK, 322 pp.. Journal of Phycology, 2022, 58, 179-181.	1.0	0