Gregory L Rorrer

List of Publications by Year
in descending order

73	2,374	186265	214800
papers	citations	28 h-index	47 g-index

75	75	75	2309
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High density cultivation and CO2 uptake by panel arrays of the macrophytic red alga Gracilaria vermiculophylla in a 100â€¯L raceway pond. Algal Research, 2022, 65, 102726.	4.6	1
2	Limits to biomass productivity during fed-batch cultivation of Laminaria saccharina female gametophyte cells in a stirred-tank photobioreactor. Journal of Applied Phycology, 2021, 33, 1011-1019.	2.8	1
3	Immobilization and growth of clonal tissue fragments from the macrophytic red alga Gracilaria vermiculophylla on porous mesh panels. Journal of Applied Phycology, 2021, 33, 2407-2414.	2.8	1
4	Immobilized cultivation of the red macroalga Ochtodes secundiramea via fluid injection of clonal shoot tissues onto porous mesh panels. Algal Research, 2021, 55, 102287.	4.6	0
5	Cultivation of the macrophytic red alga Palmaria mollis (Pacific dulse) on vertical arrays of mesh panels in aerated tanks. Journal of Applied Phycology, 2021, 33, 3915-3926.	2.8	1
6	Soluble germanium addition to silicon-starved cultures of the diatom Cyclotella sp. limits Î²-chitin nanofiber formation. Journal of Applied Phycology, 2020, 32, 901-907.	2.8	0
7	Multiscale Photonic Crystal Enhanced Coreâ€“Shell Plasmonic Nanomaterial for Rapid Vapor-Phase Detection of Explosives. ACS Applied Nano Materials, 2020, 3, 1656-1665.	5.0	13
8	Photonic Crystal Enhanced SERS Detection of Analytes Separated by Ultrathin Layer Chromatography Using a Diatom Frustule Monolayer. Advanced Materials Interfaces, 2020, 7, 2000191.	3.7	18
9	Optimizing the Design of Diatom Biosilica-Targeted Fusion Proteins in Biosensor Construction for Bacillus anthracis Detection. Biology, 2020, 9, 14.	2.8	4
10	Self-powered microfluidic pump using evaporation from diatom biosilica thin films. Microfluidics and Nanofluidics, 2020, 24, 1.	2.2	7
11	Formation of extracellular Î²-chitin nanofibers during batch cultivation of marine diatom Cyclotella sp. at silicon limitation. Journal of Applied Phycology, 2019, 31, 3479-3490.	2.8	10
12	Highly-porous diatom biosilica stationary phase for thin-layer chromatography. Journal of Chromatography A, 2019, 1591, 162-170.	3.7	11
13	Isorhamnetin encapsulation into biogenic silica from Cyclotella sp. using a microfluidic device for drug delivery applications. Biocatalysis and Agricultural Biotechnology, 2019, 19, 101175.	3.1	9
14	Biological Photonic Crystalâ€Enhanced Plasmonic Mesocapsules: Approaching Singleâ€Molecule Optofluidicâ€SERS Sensing. Advanced Optical Materials, 2019, 7, 1900415.	7.3	44
15	Photonic crystal-enhanced fluorescence imaging immunoassay for cardiovascular disease biomarker screening with machine learning analysis. Sensors and Actuators B: Chemical, 2019, 290, 118-124.	7.8	31
16	Phosphate addition strategies for enhancing the co-production of lipid and chitin nanofibers during fed-batch cultivation of the diatom Cyclotella sp.. Algal Research, 2019, 38, 101403.	4.6	15
17	Biosynthesis and extrusion of Î²-chitin nanofibers by diatoms. , 2019, , 129-150.		2
18	Effects of nitrogen delivery on chitin nanofiber production during batch cultivation of the diatom Cyclotella sp. in a bubble column photobioreactor. Journal of Applied Phycology, 2018, 30, 1575-1581.	2.8	6

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19	Selective production of the acyclic monoterpene Î²-myrcene by microplantlet suspension cultures of the macrophytic marine red alga Ochtodes secundiramea under nutrient perfusion cultivation with bromide-free medium. Algal Research, 2018, 36, 159-166.	4.6	7
20	Photonic crystal enhanced fluorescence immunoassay on diatom biosilica. Journal of Biophotonics, 2018, 11, e201800009.	2.3	21
21	Control of chitin nanofiber production by the lipidâ€producing diatom Cyclotella Sp. through fedâ€batch addition of dissolved silicon and nitrate in a bubbleâ€column photobioreactor. Biotechnology Progress, 2017, 33, 407-415.	2.6	15
22	Lipid and chitin nanofiber production during cultivation of the marine diatom Cyclotella sp. to high cell density with multistage addition of silicon and nitrate. Journal of Applied Phycology, 2017, 29, 1811-1818.	2.8	10
23	Effects of CO2 delivery on fatty acid and chitin nanofiber production during photobioreactor cultivation of the marine diatom Cyclotella sp.. Algal Research, 2017, 26, 422-430.	4.6	15
24	Effects of light intensity on the selectivity of lipid and chitin nanofiber production during photobioreactor cultivation of the marine diatom Cyclotella sp.. Algal Research, 2017, 25, 216-227.	4.6	16
25	Detecting explosive molecules from nanoliter solution: A new paradigm of SERS sensing on hydrophilic photonic crystal biosilica. Biosensors and Bioelectronics, 2017, 88, 63-70.	10.1	57
26	Microâ€photoluminescence of single living diatom cells. Luminescence, 2016, 31, 1379-1383.	2.9	12
27	Chemical and Biological Sensing Using Diatom Photonic Crystal Biosilica With In-Situ Growth Plasmonic Nanoparticles. IEEE Transactions on Nanobioscience, 2016, 15, 828-834.	3.3	42
28	Optofluidic sensing from inkjet-printed droplets: the enormous enhancement by evaporation-induced spontaneous flow on photonic crystal biosilica. Nanoscale, 2016, 8, 17285-17294.	5.6	44
29	Photoluminescence detection of 2,4,6-trinitrotoluene (TNT) binding on diatom frustule biosilica functionalized with an anti-TNT monoclonal antibody fragment. Biosensors and Bioelectronics, 2016, 79, 742-748.	10.1	31
30	Environmental life cycle optimization of essential terpene oils produced by the macroalga Ochtodes secundiramea. Science of the Total Environment, 2016, 542, 292-305.	8.0	18
31	The Potential of a Diatom-Based Photosynthetic Biorefinery for Biofuels and Valued Co-Products. Current Biotechnology, 2016, 5, 237-248.	0.4	17
32	Bioenabled SERS substrates for food safety and drinking water monitoring. Proceedings of SPIE, 2015, 9488, .	0.8	6
33	Ultra-sensitive immunoassay biosensors using hybrid plasmonic-biosilica nanostructured materials. Journal of Biophotonics, 2015, 8, 659-667.	2.3	51
34	Biogenic nanomaterials from photosynthetic microorganisms. Current Opinion in Biotechnology, 2015, 33, 23-31.	6.6	87
35	Near-Infrared Selective and Angle-Independent Backscattering from Magnetite Nanoparticle-Decorated Diatom Frustules. ACS Photonics, 2014, 1, 477-482.	6.6	9
36	Fed-batch cultivation and bioprocess modeling of Cyclotella sp. for enhanced fatty acid production by controlled silicon limitation. Algal Research, 2013, 2, 16-27.	4.6	45

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37	Enhancing surface plasmon resonances of metallic nanoparticles by diatom biosilica. Optics Express, 2013, 21, 15308.	3.4	60
38	Thermal annealing activates amplified photoluminescence of germanium metabolically doped in diatom biosilica. Journal of Materials Chemistry, 2011, 21, 10658.	6.7	19
39	Modeling of Supercritical Water Gasification of Xylose to Hydrogen-Rich Gas in a Hastelloy Microchannel Reactor. Industrial & Engineering Chemistry Research, 2011, 50, 7172-7182.	3.7	20
40	Novel form of photonic crystals for bioimaging contrast enhancement. , 2011, , .		0
41	The potential of diatom nanobiotechnology for applications in solar cells, batteries, and electroluminescent devices. Energy and Environmental Science, 2011, 4, 3930.	30.8	176
42	Changes in total lipid contents of marine diatom Nitzschia frustulum at various temperatures under Si deficiency. Korean Journal of Chemical Engineering, 2010, 27, 567-569.	2.7	5
43	Electron Microscopy and Optical Characterization of Cadmium Sulphide Nanocrystals Deposited on the Patterned Surface of Diatom Biosilica. Journal of Nanomaterials, 2009, 2009, 1-7.	2.7	30
44	Peptide-Mediated Deposition of Nanostructured TiO2 into the Periodic Structure of Diatom Biosilica and its Integration into the Fabrication of a Dye-Sensitized Solar Cell Device. Materials Research Society Symposia Proceedings, 2009, 1189, 1.	0.1	1
45	Photoluminescence Detection of Biomolecules by Antibodyâ€Functionalized Diatom Biosilica. Advanced Functional Materials, 2009, 19, 926-933.	14.9	123
46	Self-Assembly of Nanostructured Diatom Microshells into Patterned Arrays Assisted by Polyelectrolyte Multilayer Deposition and Inkjet Printing. Journal of the American Chemical Society, 2009, 131, 4178-4179.	13.7	48
47	Electroluminescence and Photoluminescence from Nanostructured Diatom Frustules Containing Metabolically Inserted Germanium. Advanced Materials, 2008, 20, 2633-2637.	21.0	92
48	Two-stage photobioreactor process for the metabolic insertion of nanostructured germanium into the silica microstructure of the diatom Pinnularia sp.. Materials Science and Engineering C, 2008, 28, 107-118.	7.3	97
49	Biogenic silica based Zn2SiO4:Mn2+ and Y2SiO5:Eu3+ phosphor layers patterned by inkjet printing process. Journal of Materials Chemistry, 2008, 18, 3633.	6.7	16
50	Conversion of Glucose to Hydrogen-Rich Gas by Supercritical Water in a Microchannel Reactor. Industrial & Engineering Chemistry Research, 2008, 47, 4106-4114.	3.7	58
51	Biological Fabrication of Photoluminescent Nanocomb Structures by Metabolic Incorporation of Germanium into the Biosilica of the Diatom Nitzschia frustulum. ACS Nano, 2008, 2, 1296-1304.	14.6	64
52	Peptide-mediated deposition of nanostructured TiO₂ into the periodic structure of diatom biosilica. Journal of Materials Research, 2008, 23, 3255-3262.	2.6	36
53	Biosynthesis and Electron Microscopy Characterization of Diatom Nanocomposites. Materials Research Society Symposia Proceedings, 2005, 901, 1.	0.1	0
54	Blue Luminescent Biogenic Silicon-Germanium Oxide Nanocomposites. Materials Research Society Symposia Proceedings, 2005, 873, 1.	0.1	3

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55	Biosynthesis of Siliconâ€“Germanium Oxide Nanocomposites by the Marine Diatom Nitzschia frustulum. Journal of Nanoscience and Nanotechnology, 2005, 5, 41-49.	0.9	38
56	Bioprocess engineering of cell and tissue cultures for marine seaweeds. Aquacultural Engineering, 2004, 32, 11-41.	3.1	71
57	Halogenated monoterpene production by microplantlets of the marine red algaOchtodes secundiramea within an airlift photobioreactor under nutrient medium perfusion. Biotechnology and Bioengineering, 2003, 82, 415-428.	3.3	28
58	Metabolic flux analysis of halogenated monoterpene biosynthesis in microplantlets of the macrophytic red alga Ochtodes secundiramea. New Biotechnology, 2003, 20, 205-215.	2.7	23
59	Isolation of Halogenated Monoterpenes from Bioreactor-Cultured Microplantlets of the Macrophytic Red AlgaeOchtodessecundirameaandPortieriahornemannii. Journal of Natural Products, 2003, 66, 743-751.	3.0	32
60	Biosynthesis of Marine Natural Products: Isolation and Characterization of a Myrcene Synthase from Cultured Tissues of the Marine Red Alga Ochtodes secundiramea. Archives of Biochemistry and Biophysics, 2002, 400, 125-132.	3.0	21
61	Dynamics of Oxygen Evolution and Biomass Production during Cultivation of Agardhiella subulata Microplantlets in a Bubble-Column Photobioreactor under Medium Perfusion. Biotechnology Progress, 2002, 18, 62-71.	2.6	20
62	HALOGENATED MONOTERPENE PRODUCTION IN REGENERATED PLANTLET CULTURES OFOCHTODES SECUNDIRAMEA(RHODOPHYTA, CRYPTONEMIALES). Journal of Phycology, 2001, 37, 1010-1019.	2.3	36
63	Bromoperoxidase activity in microplantlet suspension cultures of the macrophytic red algaOchtodes secundiramea. Biotechnology and Bioengineering, 2001, 74, 389-395.	3.3	15
64	Development and bioreactor cultivation of a novel semidifferentiated tissue suspension derived from the marine plant Acrosiphonia coalita. , 2000, 49, 559-567.		19
65	COMPARISON OF DEVELOPMENT AND PHOTOSYNTHETIC GROWTH FOR FILAMENT CLUMPS AND REGENERATED MICROPLANTLET CULTURES OF AGARDHIELLA SUBULATA (RHODOPHYTA, GIGARTINALES). Journal of Phycology, 1998, 34, 893-901.	2.3	28
66	Reaction Rates for the Partial Dehydration of Glucose to Organic Acids in Solid-Acid, Molecular-Sieving Catalyst Powders. Journal of Chemical Technology and Biotechnology, 1997, 69, 35-44.	3.2	84
67	Heterogeneous Cross-Linking of Chitosan Gel Beads:Â Kinetics, Modeling, and Influence on Cadmium Ion Adsorption Capacity. Industrial & Engineering Chemistry Research, 1997, 36, 3631-3638.	3.7	159
68	Production of hydroxy fatty acids by cell suspension cultures of the marine brown alga Laminaria saccharina. Phytochemistry, 1997, 46, 871-877.	2.9	26
69	Diffusion of Glucose and Glucitol in Microporous and Mesoporous Silicate/Aluminosilicate Catalysts. Industrial & Engineering Chemistry Research, 1996, 35, 458-464.	3.7	54
70	Photolithotrophic cultivation of Laminaria saccharina gametophyte cells in a bubble-column bioreactor. Enzyme and Microbial Technology, 1996, 18, 291-299.	3.2	24
71	Cell damage and oxygen mass transfer during cultivation of Nicotiana tabacum in a stirred-tank bioreactor. Biotechnology Progress, 1995, 11, 140-145.	2.6	31
72	Photolithotrophic cultivation ofLaminaria saccharina gametophyte cells in a stirred-tank bioreactor. Biotechnology and Bioengineering, 1995, 45, 251-260.	3.3	28

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73	Effects of Acylation and Crosslinking on the Material Properties and Cadmium Ion Adsorption Capacity of Porous Chitosan Beads. Separation Science and Technology, 1995, 30, 2455-2475.	2.5	107