

# Seetharaman Vaidyanathan

## List of Publications by Year in descending order

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65  
papers

3,821  
citations

147786

31  
h-index

123420

61  
g-index

69  
all docs

69  
docs citations

69  
times ranked

4848  
citing authors

#	ARTICLE	IF	CITATIONS
1	Metabolomics by numbers: acquiring and understanding global metabolite data. Trends in Biotechnology, 2004, 22, 245-252.	9.3	1,156
2	TOF-SIMS 3D Biomolecular Imaging of <i>Xenopus laevis</i> Oocytes Using Buckminsterfullerene (C <sub>60</sub> ) Primary Ions. Analytical Chemistry, 2007, 79, 2199-2206.	6.5	284
3	Microwave-Assisted Extraction for Microalgae: From Biofuels to Biorefinery. Biology, 2018, 7, 18.	2.8	130
4	<i>Phaeodactylum tricornutum</i> : A Diatom Cell Factory. Trends in Biotechnology, 2020, 38, 606-622.	9.3	129
5	Metabolic profiling using direct infusion electrospray ionisation mass spectrometry for the characterisation of olive oils. Analyst, The, 2002, 127, 1457-1462.	3.5	127
6	Simultaneous assay of pigments, carbohydrates, proteins and lipids in microalgae. Analytica Chimica Acta, 2013, 776, 31-40.	5.4	126
7	Microbial consortia: a critical look at microalgae co-cultures for enhanced biomanufacturing. Critical Reviews in Biotechnology, 2018, 38, 690-703.	9.0	115
8	Proteome response of <i>Phaeodactylum tricornutum</i> , during lipid accumulation induced by nitrogen depletion. Algal Research, 2016, 18, 213-224.	4.6	104
9	Flow-injection electrospray ionization mass spectrometry of crude cell extracts for high-throughput bacterial identification. Journal of the American Society for Mass Spectrometry, 2002, 13, 118-128.	2.8	97
10	Discrimination of Aerobic Endospore-forming Bacteria via Electrospray-Ionization Mass Spectrometry of Whole Cell Suspensions. Analytical Chemistry, 2001, 73, 4134-4144.	6.5	93
11	HILIC- and SCX-Based Quantitative Proteomics of <i>Chlamydomonas reinhardtii</i> during Nitrogen Starvation Induced Lipid and Carbohydrate Accumulation. Journal of Proteome Research, 2012, 11, 5959-5971.	3.7	67
12	Matrix-suppressed laser desorption/ionisation mass spectrometry and its suitability for metabolome analyses. Rapid Communications in Mass Spectrometry, 2006, 20, 1192-1198.	1.5	63
13	Subsurface Biomolecular Imaging of <i>Streptomyces coelicolor</i> Using Secondary Ion Mass Spectrometry. Analytical Chemistry, 2008, 80, 1942-1951.	6.5	61
14	Assessment of near-infrared spectral information for rapid monitoring of bioprocess quality. Biotechnology and Bioengineering, 2001, 74, 376-388.	3.3	58
15	Towards quantitative mass spectrometry-based metabolomics in microbial and mammalian systems. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150363.	3.4	56
16	Sample preparation in matrix-assisted laser desorption/ionization mass spectrometry of whole bacterial cells and the detection of high mass (>20 kDa) proteins. Rapid Communications in Mass Spectrometry, 2002, 16, 1276-1286.	1.5	53
17	Monitoring of Submerged Bioprocesses. Critical Reviews in Biotechnology, 1999, 19, 277-316.	9.0	51
18	Quantitative detection of metabolites using matrix-assisted laser desorption/ionization mass spectrometry with 9-aminoacridine as the matrix. Rapid Communications in Mass Spectrometry, 2007, 21, 2072-2078.	1.5	48

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19	Influence of nutrient status on the accumulation of biomass and lipid in <i>Nannochloropsis salina</i> and <i>Dunaliella salina</i> . <i>Energy Conversion and Management</i> , 2015, 106, 61-72.	9.2	47
20	At-line monitoring of a submerged filamentous bacterial cultivation using near-infrared spectroscopy. <i>Enzyme and Microbial Technology</i> , 2000, 27, 691-697.	3.2	46
21	Influence of gas management on biochemical conversion of CO <sub>2</sub> by microalgae for biofuel production. <i>Applied Energy</i> , 2020, 261, 114420.	10.1	44
22	Microalgae: a robust "green bio-bridge" between energy and environment. <i>Critical Reviews in Biotechnology</i> , 2018, 38, 351-368.	9.0	43
23	Biomolecular transitions and lipid accumulation in green microalgae monitored by FTIR and Raman analysis. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2020, 224, 117382.	3.9	41
24	Effects of cryopreservation on viability and functional stability of an industrially relevant alga. <i>Scientific Reports</i> , 2019, 9, 2093.	3.3	40
25	Interactions between polyethylene and polypropylene microplastics and <i>Spirulina</i> sp. microalgae in aquatic systems. <i>Heliyon</i> , 2021, 7, e07676.	3.2	40
26	Explanatory Optimization of Protein Mass Spectrometry via Genetic Search. <i>Analytical Chemistry</i> , 2003, 75, 6679-6686.	6.5	39
27	A simple, reproducible and sensitive spectrophotometric method to estimate microalgal lipids. <i>Analytica Chimica Acta</i> , 2012, 724, 67-72.	5.4	38
28	Fundamental investigations on the near-infrared spectra of microbial biomass as applicable to bioprocess monitoring. <i>Analyst, The</i> , 1999, 124, 157-162.	3.5	36
29	Critical Evaluation of Models Developed for Monitoring an Industrial Submerged Bioprocess for Antibiotic Production Using Near-Infrared Spectroscopy. <i>Biotechnology Progress</i> , 2000, 16, 1098-1105.	2.6	36
30	Influence of washing and quenching in profiling the metabolome of adherent mammalian cells: a case study with the metastatic breast cancer cell line MDA-MB-231. <i>Analyst, The</i> , 2017, 142, 2038-2049.	3.5	35
31	Co-culturing microbial consortia: approaches for applications in biomanufacturing and bioprocessing. <i>Critical Reviews in Biotechnology</i> , 2022, 42, 46-72.	9.0	34
32	Deconvolution of near-infrared spectral information for monitoring mycelial biomass and other key analytes in a submerged fungal bioprocess. <i>Analytica Chimica Acta</i> , 2001, 428, 41-59.	5.4	33
33	Uncovering new challenges in bio-analysis with ToF-SIMS. <i>Applied Surface Science</i> , 2008, 255, 1264-1270.	6.1	30
34	The Search for a Lipid Trigger: The Effect of Salt Stress on the Lipid Profile of the Model Microalgal Species <i>Chlamydomonas reinhardtii</i> for Biofuels Production. <i>Current Biotechnology</i> , 2016, 5, 305-313.	0.4	30
35	Dissolved inorganic carbon speciation in aquatic environments and its application to monitor algal carbon uptake. <i>Science of the Total Environment</i> , 2016, 541, 1282-1295.	8.0	29
36	Effect of ammonium and high light intensity on the accumulation of lipids in <i>Nannochloropsis oceanica</i> (CCAP 849/10) and <i>Phaeodactylum tricornutum</i> (CCAP 1055/1). <i>Biotechnology for Biofuels</i> , 2018, 11, 60.	6.2	28

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37	A laser desorption ionisation mass spectrometry approach for high throughput metabolomics. <i>Metabolomics</i> , 2005, 1, 243-250.	3.0	27
38	Laser desorption/ionization mass spectrometry on porous silicon for metabolome analyses: influence of surface oxidation. <i>Rapid Communications in Mass Spectrometry</i> , 2007, 21, 2157-2166.	1.5	26
39	Cell line dependence of metabolite leakage in metabolome analyses of adherent normal and cancer cell lines. <i>Metabolomics</i> , 2015, 11, 1743-1755.	3.0	26
40	Diatoms for Carbon Sequestration and Bio-Based Manufacturing. <i>Biology</i> , 2020, 9, 217.	2.8	23
41	Selective Detection of Proteins in Mixtures Using Electrospray Ionization Mass Spectrometry: Influence of Instrumental Settings and Implications for Proteomics. <i>Analytical Chemistry</i> , 2004, 76, 5024-5032.	6.5	21
42	Assessment of the Structure and Predictive Ability of Models Developed for Monitoring Key Analytes in a Submerged Fungal Bioprocess Using Near-Infrared Spectroscopy. <i>Applied Spectroscopy</i> , 2001, 55, 444-453.	2.2	20
43	Influence of morphology on the near-infrared spectra of mycelial biomass and its implications in bioprocess monitoring. <i>Biotechnology and Bioengineering</i> , 2003, 82, 715-724.	3.3	20
44	Towards proteomics-on-chip: The role of the surface. <i>Molecular BioSystems</i> , 2011, 7, 101-115.	2.9	20
45	The Effect of High-Intensity Ultraviolet Light to Elicit Microalgal Cell Lysis and Enhance Lipid Extraction. <i>Metabolites</i> , 2018, 8, 65.	2.9	20
46	Profiling microbial metabolomes: what do we stand to gain?. <i>Metabolomics</i> , 2005, 1, 17-28.	3.0	19
47	TOF-SIMS investigation of <i>Streptomyces coelicolor</i> , a mycelial bacterium. <i>Applied Surface Science</i> , 2008, 255, 922-925.	6.1	12
48	Influence of nutrient status on the biohydrogen and lipid productivity in <i>Parachlorella kessleri</i> : a biorefinery approach. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 10293-10305.	3.6	11
49	Microbial consortia: Concept and application in fruit crop management. , 2020, , 353-366.		11
50	Explanatory multivariate analysis of ToF-SIMS spectra for the discrimination of bacterial isolates. <i>Analyst</i> , The, 2009, 134, 2352.	3.5	10
51	The transition away from chemical flocculants: Commercially viable harvesting of <i>Phaeodactylum tricornutum</i> . <i>Separation and Purification Technology</i> , 2021, 255, 117733.	7.9	9
52	Exploratory analysis of TOF-SIMS data from biological surfaces. <i>Applied Surface Science</i> , 2008, 255, 1599-1602.	6.1	8
53	An efficient TOF-SIMS image analysis with spatial correlation and alternating non-negativity-constrained least squares. <i>Bioinformatics</i> , 2015, 31, 753-760.	4.1	7
54	Towards a <i>Phaeodactylum tricornutum</i> biorefinery in an outdoor UK environment. <i>Bioresource Technology</i> , 2022, 344, 126320.	9.6	7

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55	Response to nutrient variation on lipid productivity in green microalgae captured using second derivative FTIR and Raman spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2022, 270, 120830.	3.9	7
56	Direct infusion electrospray ionization mass spectra of crude cell extracts for microbial characterizations: influence of solvent conditions on the detection of proteins. <i>Rapid Communications in Mass Spectrometry</i> , 2006, 20, 21-30.	1.5	6
57	Quenching for Microalgal Metabolomics: A Case Study on the Unicellular Eukaryotic Green Alga <i>Chlamydomonas reinhardtii</i> . <i>Metabolites</i> , 2018, 8, 72.	2.9	5
58	Metabolome and Proteome Profiling for Microbial Characterization. , 2003, , 9-38.		4
59	A selective metabolite array for the detection of phosphometabolites. <i>Analytica Chimica Acta</i> , 2012, 724, 119-126.	5.4	3
60	Vapour-mediated ion activation for enhanced SIMS imaging. <i>Surface and Interface Analysis</i> , 2013, 45, 290-293.	1.8	3
61	Enabling large-scale production of algal oil in continuous output mode. <i>IScience</i> , 2021, 24, 102743.	4.1	3
62	Cellular metabolic profiling using ToF-SIMS. <i>Surface and Interface Analysis</i> , 2013, 45, 255-259.	1.8	2
63	A solvation-based screening approach for metabolite arrays. <i>Analyst, The</i> , 2012, 137, 2350.	3.5	1
64	Capture agents, conversion mechanisms, biotransformations and biomimetics: general discussion. <i>Faraday Discussions</i> , 2015, 183, 463-487.	3.2	1
65	High-Throughput Microbial Characterizations Using Electrospray Ionization Mass Spectrometry and Its Role in Functional Genomics. , 2006, , 229-256.		0