Sang Jun Sim

List of Publications by Year in Descending Order

256 papers	8,572 citations	53 h-index	79 g-index
266 ext. papers	9,879 ext. citations	7.3 avg, IF	6.6 L-index

#	Paper	IF	Citations
256	Effective contamination control strategies facilitating axenic cultivation of Haematococcus pluvialis: Risks and challenges. *Bioresource Technology*, **2022**, 344, 126289	11	3
255	Mass cultivation and harvesting of microalgal biomass: Current trends and future perspectives. *Bioresource Technology*, **2022**, 344, 126406	11	7
254	Highly sensitive surface-enhanced Raman scattering-based immunosensor incorporating half antibody-fragment for quantitative detection of Alzheimer's disease biomarker in blood.. *Analytica Chimica Acta*, **2022**, 1195, 339445	6.6	4
253	Microalgal fuels: Promising energy reserves for the future. *Fuel*, **2022**, 312, 122841	7.1	4
252	Multifaceted strategies for economic production of microalgae Haematococcus pluvialis-derived astaxanthin via direct conversion of CO. *Bioresource Technology*, **2022**, 344, 126255	11	2
251	Label-free and highly sensitive nanoplasmonic biosensor-based autophagy flux sensing for clinical application. *Sensors and Actuators B: Chemical*, **2022**, 350, 130880	8.5	1
250	The hazardous threat of Bisphenol A: Toxicity, detection and remediation. *Journal of Hazardous Materials*, **2022**, 423, 127097	12.8	12
249	Macular pigment-enriched oil production from genome-edited microalgae.. *Microbial Cell Factories*, **2022**, 21, 27	6.4	2
248	Design and applications of photobioreactors- A review.. *Bioresource Technology*, **2022**, 126858	11	16
247	Nanoplasmonic biosensing of specific LC3 autophagy markers enabling drug discovery of autophagy modulators. *Sensors and Actuators B: Chemical*, **2022**, 131744	8.5	0
246	Waste mitigation and resource recovery from food industry wastewater employing microalgae-bacterial consortium.. *Bioresource Technology*, **2022**, 352, 127129	11	1
245	Three-dimensional hierarchical plasmonic nano-architecture based label-free surface-enhanced Raman spectroscopy detection of urinary exosomal miRNA for clinical diagnosis of prostate cancer.. *Biosensors and Bioelectronics*, **2022**, 205, 114116	11.8	7
244	Accelerated sunlight-driven conversion of industrial flue gas into biofuels by microfluidic high-throughput screening towards improving photosynthesis in microalgae under fluctuating light. *Chemical Engineering Journal*, **2022**, 136487	14.7	0
243	Sustainable microalgal biomass production in food industry wastewater for low-cost biorefinery products: a review.. *Phytochemistry Reviews*, **2022**, 1-23	7.7	1
242	Reconsidering the potential of direct microalgal biomass utilization as end-products: A review. *Renewable and Sustainable Energy Reviews*, **2021**, 155, 111930	16.2	2
241	Strategy for high-yield astaxanthin recovery directly from wet Haematococcus pluvialis without pretreatment.. *Bioresource Technology*, **2021**, 126616	11	0
240	Detection of multiplex exosomal miRNAs for clinically accurate diagnosis of Alzheimer's disease using label-free plasmonic biosensor based on DNA-Assembled advanced plasmonic architecture. *Biosensors and Bioelectronics*, **2021**, 199, 113864	11.8	5

239	Augmented CO tolerance by expressing a single H-pump enables microalgal valorization of industrial flue gas. *Nature Communications*, **2021**, 12, 6049	17.4	4
238	Nanofluid research advances: Preparation, characteristics and applications in food processing. *Food Research International*, **2021**, 150, 110751	7	4
237	Highly sensitive and multiplexed one-step RT-qPCR for profiling genes involved in the circadian rhythm using microparticles. *Scientific Reports*, **2021**, 11, 6463	4.9	0
236	Engineering interventions in enzyme production: Lab to industrial scale. *Bioresource Technology*, **2021**, 326, 124771	11	8
235	Harnessing fruit waste for poly-3-hydroxybutyrate production: A review. *Bioresource Technology*, **2021**, 326, 124734	11	21
234	Improved CO-derived polyhydroxybutyrate (PHB) production by engineering fast-growing cyanobacterium Synechococcus elongatus UTEX 2973 for potential utilization of flue gas. *Bioresource Technology*, **2021**, 327, 124789	11	11
233	A green decontamination technology through selective biomineralization of algicidal microorganisms for enhanced astaxanthin production from Haematococcus pluvialis at commercial scale. *Bioresource Technology*, **2021**, 332, 125121	11	5
232	Outdoor cultivation of microalgae in a coal-fired power plant for conversion of flue gas CO2 into microalgal direct combustion fuels. *Systems Microbiology and Biomanufacturing*, **2021**, 1, 90-99		9
231	Recent advancements in mixotrophic bioprocessing for production of high value microalgal products. *Bioresource Technology*, **2021**, 320, 124421	11	25
230	Improvement of Photoautotrophic Algal Biomass Production after Interrupted CO2 Supply by Urea and KH2PO4 Injection. *Energies*, **2021**, 14, 778	3.1	5
229	Algal glycobiotechnology: omics approaches for strain improvement. *Microbial Cell Factories*, **2021**, 20, 163	6.4	7
228	Robust cyst germination induction in Haematococcus pluvialis to enhance astaxanthin productivity in a semi-continuous outdoor culture system using power plant flue gas. *Bioresource Technology*, **2021**, 338, 125533	11	11
227	Enhanced biomass production through a repeated sequential auto-and heterotrophic culture mode in Chlorella protothecoides. *Bioresource Technology*, **2021**, 338, 125532	11	8
226	Strategies and advances in the pretreatment of microalgal biomass. *Journal of Biotechnology*, **2021**, 341, 63-75	3.7	5
225	Concurrent enhancement of CO fixation and productivities of omega-3 fatty acids and astaxanthin in Haematococcus pluvialis culture via calcium-mediated homeoviscous adaptation and biomineralization. *Bioresource Technology*, **2021**, 340, 125720	11	6
224	Sustainable production of polyhydroxybutyrate from autotrophs using CO as feedstock: Challenges and opportunities. *Bioresource Technology*, **2021**, 341, 125751	11	16
223	Mixotrophic biorefinery: A promising algal platform for sustainable biofuels and high value coproducts. *Renewable and Sustainable Energy Reviews*, **2021**, 152, 111669	16.2	11
222	Microalgal Biorefinery: A Sustainable Technology Toward Circular Bioeconomy and Microalgal Biomass Valorization **2021**, 323-350		1

221	Precisely Controlled Three-Dimensional Gold Nanoparticle Assembly Based on Spherical Bacteriophage Scaffold for Molecular Sensing via Surface-Enhanced Raman Scattering. *Journal of Physical Chemistry C*, **2021**, 125, 2502-2510	3.8	1
220	Single plasmonic nanostructures for biomedical diagnosis. *Journal of Materials Chemistry B*, **2020**, 8, 6197-6216	7.9	4
219	A sustainable mixotrophic microalgae cultivation from dairy wastes for carbon credit, bioremediation and lucrative biofuels. *Bioresource Technology*, **2020**, 313, 123681	11	29
218	Enhancing lipid productivity by modulating lipid catabolism using the CRISPR-Cas9 system in Chlamydomonas. *Journal of Applied Phycology*, **2020**, 32, 2829-2840	3.2	21
217	Arginine-fed cultures generates triacylglycerol by triggering nitrogen starvation responses during robust growth in Chlamydomonas. *Algal Research*, **2020**, 46, 101782	5	3
216	Morphological Change and Cell Disruption of Haematococcus pluvialis Cyst during High-Pressure Homogenization for Astaxanthin Recovery. *Applied Sciences (Switzerland)*, **2020**, 10, 513	2.6	15
215	Repeated-batch production of omega-3 enriched biomass of Chlorella sorokiniana via calcium-induced homeoviscous adaptation. *Bioresource Technology*, **2020**, 303, 122944	11	8
214	Metabolic rewiring of synthetic pyruvate dehydrogenase bypasses for acetone production in cyanobacteria. *Plant Biotechnology Journal*, **2020**, 18, 1860-1868	11.6	15
213	Emerging prospects of mixotrophic microalgae: Way forward to sustainable bioprocess for environmental remediation and cost-effective biofuels. *Bioresource Technology*, **2020**, 300, 122741	11	59
212	Real-time monitoring of distinct binding kinetics of hot-spot mutant p53 protein in human cancer cells using an individual nanorod-based plasmonic biosensor. *Sensors and Actuators B: Chemical*, **2020**, 322, 128584	8.5	12
211	Scalable Cultivation of Engineered Cyanobacteria for Squalene Production from Industrial Flue Gas in a Closed Photobioreactor. *Journal of Agricultural and Food Chemistry*, **2020**, 68, 10050-10055	5.7	7
210	SERS-based Nanoplasmonic Exosome Analysis: Enabling Liquid Biopsy for Cancer Diagnosis and Monitoring Progression. *Biochip Journal*, **2020**, 14, 231-241	4	11
209	Safe and Complete Extraction of Astaxanthin from Haematococcus pluvialis by Efficient Mechanical Disruption of Cyst Cell Wall. *International Journal of Food Engineering*, **2019**, 15,	1.9	5
208	Acidic cultivation of Haematococcus pluvialis for improved astaxanthin production in the presence of a lethal fungus. *Bioresource Technology*, **2019**, 278, 138-144	11	42
207	A label-free, ultra-highly sensitive and multiplexed SERS nanoplasmonic biosensor for miRNA detection using a head-flocked gold nanopillar. *Analyst, The*, **2019**, 144, 1768-1776	5	42
206	Microalgae Bioenergy with Carbon Capture and Storage (BECCS): An emerging sustainable bioprocess for reduced CO2 emission and biofuel production. *Bioresource Technology Reports*, **2019**, 7, 100270	4.1	44
205	Enhancement of growth and paramylon production of Euglena gracilis by co-cultivation with Pseudoalteromonas sp. MEBiC 03485. *Bioresource Technology*, **2019**, 288, 121513	11	12
204	Overexpression of malic enzyme isoform 2 in Chlamydomonas reinhardtii PTS42 increases lipid production. *Bioresource Technology Reports*, **2019**, 7, 100239	4.1	15

203	Enhanced biomass and lipid production of Neochloris oleoabundans under high light conditions by anisotropic nature of light-splitting CaCO crystal. *Bioresource Technology*, **2019**, 287, 121483	11	17
202	Microalgal-Based Carbon Sequestration by Converting LNG-Fired Waste CO2 into Red Gold Astaxanthin: The Potential Applicability. *Energies*, **2019**, 12, 1718	3.1	26
201	Cancer Diagnostics: Quantitative and Specific Detection of Exosomal miRNAs for Accurate Diagnosis of Breast Cancer Using a Surface-Enhanced Raman Scattering Sensor Based on Plasmonic Head-Flocked Gold Nanopillars (Small 17/2019). *Small*, **2019**, 15, 1970091	11	13
200	Autotrophic Biodiesel Production from the Thermotolerant Microalga Chlorella sorokiniana by Enhancing the Carbon Availability with Temperature Adjustment. *Biotechnology and Bioprocess Engineering*, **2019**, 24, 223-231	3.1	13
199	Effect of light conditions on mixotrophic cultivation of green microalgae. *Bioresource Technology*, **2019**, 282, 245-253	11	71
198	Quantitative and Specific Detection of Exosomal miRNAs for Accurate Diagnosis of Breast Cancer Using a Surface-Enhanced Raman Scattering Sensor Based on Plasmonic Head-Flocked Gold Nanopillars. *Small*, **2019**, 15, e1804968	11	83
197	A Nanoplasmonic Biosensor for Ultrasensitive Detection of Alzheimer's Disease Biomarker Using a Chaotropic Agent. *ACS Sensors*, **2019**, 4, 595-602	9.2	27
196	Screening of oleaginous algal strains from Chlamydomonas reinhardtii mutant libraries via density gradient centrifugation. *Biotechnology and Bioengineering*, **2019**, 116, 3179-3188	4.9	7
195	Development of Hydrogel Microparticle based RT-qPCR for Advanced Detection of BCR-ABL1 Transcripts. *Biochip Journal*, **2019**, 13, 182-190	4	5
194	Split mixotrophy: A novel cultivation strategy to enhance the mixotrophic biomass and lipid yields of Chlorella protothecoides. *Bioresource Technology*, **2019**, 291, 121820	11	26
193	One-Pot, Simultaneous Cell Wall Disruption and Complete Extraction of Astaxanthin fromHaematococcus pluvialisat Room Temperature. *ACS Sustainable Chemistry and Engineering*, **2019**, 7, 13898-13910	8.3	16
192	Comprehensive approach to improving life-cycle CO reduction efficiency of microalgal biorefineries: A review. *Bioresource Technology*, **2019**, 291, 121879	11	19
191	Sedimentation rate-based screening of oleaginous microalgae for utilization as a direct combustion fuel. *Bioresource Technology*, **2019**, 293, 122045	11	14
190	Single gold-bridged nanoprobes for identification of single point DNA mutations. *Nature Communications*, **2019**, 10, 836	17.4	36
189	High-efficiency cell disruption and astaxanthin recovery from Haematococcus pluvialis cyst cells using room-temperature imidazolium-based ionic liquid/water mixtures. *Bioresource Technology*, **2019**, 274, 120-126	11	53
188	Performance and potential appraisal of various microalgae as direct combustion fuel. *Bioresource Technology*, **2019**, 273, 341-349	11	53
187	Thermostable cellulases: Current status and perspectives. *Bioresource Technology*, **2019**, 279, 385-392	11	103
186	Low-blinking SERS substrate for switchable detection of kanamycin. *Sensors and Actuators B: Chemical*, **2019**, 282, 765-773	8.5	39

185	Targeted knockout of phospholipase A to increase lipid productivity in Chlamydomonas reinhardtii for biodiesel production. *Bioresource Technology*, **2019**, 271, 368-374	11	69
184	Multilateral approach on enhancing economic viability of lipid production from microalgae: A review. *Bioresource Technology*, **2018**, 258, 335-344	11	75
183	Vibration-induced stress priming during seed culture increases microalgal biomass in high shear field-cultivation. *Bioresource Technology*, **2018**, 254, 340-346	11	3
182	Performance of point-of-care diagnosis of AIDS: label-free one-step-immunoassay vs. lateral flow assay. *Analyst, The*, **2018**, 143, 936-942	5	4
181	Overview of Microalgae-Based Carbon Capture and Utilization **2018**, 287-294		
180	Identification of small droplets of photosynthetic squalene in engineered Synechococcus elongatus PCC 7942 using TEM and selective fluorescent Nile red analysis. *Letters in Applied Microbiology*, **2018**, 66, 523-529	2.9	3
179	A shape-code nanoplasmonic biosensor for multiplex detection of Alzheimer's disease biomarkers. *Biosensors and Bioelectronics*, **2018**, 101, 96-102	11.8	68
178	Rapid selection of astaxanthin-hyperproducing Haematococcus mutant via azide-based colorimetric assay combined with oil-based astaxanthin extraction. *Bioresource Technology*, **2018**, 267, 175-181	11	30
177	Multiplex real-time PCR using temperature sensitive primer-supplying hydrogel particles and its application for malaria species identification. *PLoS ONE*, **2018**, 13, e0190451	3.7	5
176	Improvement in modular scalability of polymeric thin-film photobioreactor for autotrophic culturing of Haematococcus pluvialis using industrial flue gas. *Bioresource Technology*, **2018**, 249, 519-526	11	30
175	Photoautotrophic production of macular pigment in a Chlamydomonas reinhardtii strain generated by using DNA-free CRISPR-Cas9 RNP-mediated mutagenesis. *Biotechnology and Bioengineering*, **2018**, 115, 719-728	4.9	56
174	Two-Dimensional Microfluidic System for the Simultaneous Quantitative Analysis of Phototactic/Chemotactic Responses of Microalgae. *Analytical Chemistry*, **2018**, 90, 14029-14038	7.8	6
173	Polymeric Nanocomplex Encapsulating Iron Oxide Nanoparticles in Constant Size for Controllable Magnetic Field Reactivity. *Langmuir*, **2018**, 34, 12827-12833	4	8
172	Adsorptive removal of harmful algal species Microcystis aeruginosa directly from aqueous solution using polyethylenimine coated polysulfone-biomass composite fiber. *Biodegradation*, **2018**, 29, 349-358	4.1	8
171	Photosynthetic CO Conversion to Fatty Acid Ethyl Esters (FAEEs) Using Engineered Cyanobacteria. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 1087-1092	5.7	27
170	A fluorogenic molecular nanoprobe with an engineered internal environment for sensitive and selective detection of biological hydrogen sulfide. *Chemical Communications*, **2017**, 53, 2275-2278	5.8	14
169	PDMS microchannel surface modification with teflon for algal lipid research. *Biochip Journal*, **2017**, 11, 180-186	4	9
168	Development of an X-Shape airlift photobioreactor for increasing algal biomass and biodiesel production. *Bioresource Technology*, **2017**, 239, 211-218	11	37

167	Development of large-scale and economic pH control system for outdoor cultivation of microalgae Haematococcus pluvialis using industrial flue gas. *Bioresource Technology*, **2017**, 244, 1235-1244	11	57
166	Improvement of Squalene Production from CO in Synechococcus elongatus PCC 7942 by Metabolic Engineering and Scalable Production in a Photobioreactor. *ACS Synthetic Biology*, **2017**, 6, 1289-1295	5.7	38
165	Direct Conversion of CO to Farnesene Using Metabolically Engineered Synechococcus elongatus PCC 7942. *Journal of Agricultural and Food Chemistry*, **2017**, 65, 10424-10428	5.7	32
164	Magnetophoretic sorting of microdroplets with different microalgal cell densities for rapid isolation of fast growing strains. *Scientific Reports*, **2017**, 7, 10390	4.9	26
163	A self-generated and degradation-resistive cratered stainless steel electrocatalyst for efficient water oxidation in a neutral electrolyte. *Journal of Materials Chemistry A*, **2017**, 5, 19210-19219	13	18
162	Development of SyneBrick Vectors As a Synthetic Biology Platform for Gene Expression in PCC 7942. *Frontiers in Plant Science*, **2017**, 8, 293	6.2	44
161	Synergistic effect of multiple stress conditions for improving microalgal lipid production. *Algal Research*, **2016**, 19, 215-224	5	48
160	Gold nanocrystals with DNA-directed morphologies. *Nature Communications*, **2016**, 7, 12873	17.4	39
159	Microfluidic high-throughput selection of microalgal strains with superior photosynthetic productivity using competitive phototaxis. *Scientific Reports*, **2016**, 6, 21155	4.9	47
158	DNA-free two-gene knockout in Chlamydomonas reinhardtii via CRISPR-Cas9 ribonucleoproteins. *Scientific Reports*, **2016**, 6, 30620	4.9	188
157	Adjuvant effect of B domain of staphyloccocal protein A displayed on the surface of hepatitis B virus capsid. *Biotechnology and Bioengineering*, **2016**, 113, 268-74	4.9	5
156	Vertically encoded tetragonal hydrogel microparticles for multiplexed detection of miRNAs associated with Alzheimer's disease. *Analyst, The*, **2016**, 141, 4578-86	5	20
155	Multiplex microfluidic system integrating sequential operations of microalgal lipid production. *Analyst, The*, **2016**, 141, 1218-25	5	13
154	Reversible and multi-cyclic protein-protein interaction in bacterial cellulosome-mimic system using rod-shaped viral nanostructure. *Journal of Biotechnology*, **2016**, 221, 101-6	3.7	4
153	Effect of red cyst cell inoculation and iron(II) supplementation on autotrophic astaxanthin production by Haematococcus pluvialis under outdoor summer conditions. *Journal of Biotechnology* , **2016**, 218, 25-33	3.7	42
152	Autotrophic hydrogen photoproduction by operation of carbon-concentrating mechanism in Chlamydomonas reinhardtii under sulfur deprivation condition. *Journal of Biotechnology*, **2016**, 221, 55-61	3.7	6
151	Nanoplasmonic probes of RNA folding and assembly during pre-mRNA splicing. *Nanoscale*, **2016**, 8, 4599-607	7.7	4
150	A Whole-Cell Surface Plasmon Resonance Sensor Based on a Leucine Auxotroph of Escherichia coli Displaying a Gold-Binding Protein: Usefulness for Diagnosis of Maple Syrup Urine Disease. *Analytical Chemistry*, **2016**, 88, 2871-6	7.8	7

149	Microdroplet photobioreactor for the photoautotrophic culture of microalgal cells. *Analyst, The*, **2016**, 141, 989-98	5	25
148	Microfluidic neural axon diode **2016**, 04, 240-248		14
147	Photosynthetic conversion of CO2 to farnesyl diphosphate-derived phytochemicals (amorpha-4,11-diene and squalene) by engineered cyanobacteria. *Biotechnology for Biofuels*, **2016**, 9, 202	7.8	57
146	Transcriptome landscape of Synechococcus elongatus PCC 7942 for nitrogen starvation responses using RNA-seq. *Scientific Reports*, **2016**, 6, 30584	4.9	22
145	Quantitative analysis of the chemotaxis of a green alga, Chlamydomonas reinhardtii, to bicarbonate using diffusion-based microfluidic device. *Biomicrofluidics*, **2016**, 10, 014121	3.2	21
144	Tracking of STAT3 signaling for anticancer drug-discovery based on localized surface plasmon resonance. *Analyst, The*, **2016**, 141, 2493-501	5	6
143	Development of SERS substrate using phage-based magnetic template for triplex assay in sepsis diagnosis. *Biosensors and Bioelectronics*, **2016**, 85, 522-528	11.8	29
142	Engineering of a modular and synthetic phosphoketolase pathway for photosynthetic production of acetone from CO2 in Synechococcus elongatus PCC 7942 under light and aerobic condition. *Plant Biotechnology Journal*, **2016**, 14, 1768-76	11.6	53
141	Good things come in small packages: Overcoming challenges to harness extracellular vesicles for therapeutic delivery. *Journal of Controlled Release*, **2016**, 241, 174-185	11.7	91
140	Introducing Dunaliella LIP promoter containing light-inducible motifs improves transgenic expression in Chlamydomonas reinhardtii. *Biotechnology Journal*, **2016**, 11, 384-92	5.6	20
139	Enhanced autotrophic astaxanthin production from Haematococcus pluvialis under high temperature via heat stress-driven Haber-Weiss reaction. *Applied Microbiology and Biotechnology*, **2015**, 99, 5203-15	5.7	66
138	Homologous sense and antisense expression of a gene in Dunaliella tertiolecta. *Planta*, **2015**, 242, 1051-8	4.7	3
137	A microscale approach for simple and rapid monitoring of cell growth and lipid accumulation in Neochloris oleoabundans. *Bioprocess and Biosystems Engineering*, **2015**, 38, 2035-43	3.7	6
136	A nanoplasmonic biosensor for label-free multiplex detection of cancer biomarkers. *Biosensors and Bioelectronics*, **2015**, 74, 341-6	11.8	65
135	Multiplex diagnosis of viral infectious diseases (AIDS, hepatitis C, and hepatitis A) based on point of care lateral flow assay using engineered proteinticles. *Biosensors and Bioelectronics*, **2015**, 69, 213-25	11.8	47
134	Enhanced biodiesel production in Neochloris oleoabundans by a semi-continuous process in two stage photobioreactors. *Bioprocess and Biosystems Engineering*, **2015**, 38, 1415-21	3.7	21
133	Fabrication of plasmon length-based surface enhanced Raman scattering for multiplex detection on microfluidic device. *Biosensors and Bioelectronics*, **2015**, 70, 358-65	11.8	38
132	Enhanced carbon dioxide fixation of Haematococcus pluvialis using sequential operating system in tubular photobioreactors. *Process Biochemistry*, **2015**, 50, 1091-1096	4.8	18

131	Enhanced astaxanthin extraction efficiency from Haematococcus pluvialis via the cyst germination in outdoor culture systems. *Process Biochemistry*, **2015**, 50, 2275-2280	4.8	9
130	Single gold nanoplasmonic sensor for clinical cancer diagnosis based on specific interaction between nucleic acids and protein. *Biosensors and Bioelectronics*, **2015**, 67, 59-65	11.8	38
129	Gold nanostar based biosensor detects epigenetic alterations on promoter of real cells. *Biosensors and Bioelectronics*, **2015**, 66, 497-503	11.8	21
128	Extreme furfural tolerance of a soil bacterium Enterobacter cloacae GGT036. *Journal of Biotechnology*, **2015**, 193, 11-3	3.7	10
127	Nanoplasmonic biosensor: detection and amplification of dual bio-signatures of circulating tumor DNA. *Biosensors and Bioelectronics*, **2015**, 67, 443-9	11.8	84
126	Evaluation of Chemical Interactions between Small Molecules in the Gas Phase Using Chemical Force Microscopy. *Sensors*, **2015**, 15, 30683-92	3.8	4
125	Label-free detection of ApoE4-mediated β-amyloid aggregation on single nanoparticle uncovering Alzheimer's disease. *Biosensors and Bioelectronics*, **2015**, 72, 197-204	11.8	43
124	A Microreactor System for Cultivation of Haematococcus pluvialis and Astaxanthin Production. *Journal of Nanoscience and Nanotechnology*, **2015**, 15, 1618-23	1.3	10
123	Plasmonic coupling-dependent SERS of gold nanoparticles anchored on methylated DNA and detection of global DNA methylation in SERS-based platforms. *Journal of Optics (United Kingdom)*, **2015**, 17, 114022	1.7	8
122	Transcriptomic analysis of Corynebacterium glutamicum in the response to the toxicity of furfural present in lignocellulosic hydrolysates. *Process Biochemistry*, **2015**, 50, 347-356	4.8	12
121	Succinate production from CO_2-grown microalgal biomass as carbon source using engineered Corynebacterium glutamicum through consolidated bioprocessing. *Scientific Reports*, **2014**, 4, 5819	4.9	33
120	Enhanced astaxanthin production from microalga, Haematococcus pluvialis by two-stage perfusion culture with stepwise light irradiation. *Bioprocess and Biosystems Engineering*, **2014**, 37, 2039-47	3.7	53
119	Resonant Rayleigh light scattering of single Au nanoparticles with different sizes and shapes. *Nanoscale*, **2014**, 6, 2307-15	7.7	49
118	Distinct Rayleigh scattering from hot spot mutant p53 proteins reveals cancer cells. *Small*, **2014**, 10, 2954-62	11	5
117	Capture and culturing of single microalgae cells, and retrieval of colonies using a perforated hemispherical microwell structure. *RSC Advances*, **2014**, 4, 61298-61304	3.7	7
116	Integrated microfluidic platform for multiple processes from microalgal culture to lipid extraction. *Analytical Chemistry*, **2014**, 86, 8585-92	7.8	25
115	Target-specific delivery of siRNA by stabilized calcium phosphate nanoparticles using dopa-hyaluronic acid conjugate. *Journal of Controlled Release*, **2014**, 192, 122-30	11.7	104
114	Signal enhancement strategy for a micro-arrayed polydiacetylene (PDA) immunosensor using enzyme-catalyzed precipitation. *Biosensors and Bioelectronics*, **2014**, 61, 314-20	11.8	19

113	Mechanosensitive physiology of Chlamydomonas reinhardtii under direct membrane distortion. *Scientific Reports*, **2014**, 4, 4675	4.9	17
112	Effect of magnetic modulation of mitochondrial voltage-dependent anion channel 2 against beta-amyloid induced neurotoxicity. *RSC Advances*, **2014**, 4, 63681-63684	3.7	
111	Improvement of hydrocarbon recovery by spouting solvent into culture of Botryococcus braunii. *Bioprocess and Biosystems Engineering*, **2013**, 36, 1977-85	3.7	12
110	Amplification of resonant Rayleigh light scattering response using immunogold colloids for detection of lysozyme. *Small*, **2013**, 9, 3485-92	11	17
109	Recombinant tagging system using ribosomal frameshifting to monitor protein expression. *Biotechnology and Bioengineering*, **2013**, 110, 898-904	4.9	3
108	Femtomolar detection of single mismatches by discriminant analysis of DNA hybridization events using gold nanoparticles. *Analyst, The*, **2013**, 138, 1794-802	5	7
107	Development of thin-film photo-bioreactor and its application to outdoor culture of microalgae. *Bioprocess and Biosystems Engineering*, **2013**, 36, 729-36	3.7	26
106	Fluorogenic pH-sensitive polydiacetylene (PDA) liposomes as a drug carrier. *Journal of Nanoscience and Nanotechnology*, **2013**, 13, 3792-800	1.3	3
105	Real-time, sensitive, and specific detection of promoter-polymerase interactions in gene transcription using a nanoplasmonic sensor. *Advanced Materials*, **2013**, 25, 1265-9	24	15
104	Effects of NOx and SOx on the Medium pH and microalgal growth in photo-culture system. *Transactions of the Korean Hydrogen and New Energy Society*, **2013**, 24, 255-263	0.5	1
103	Gold-based optical biosensor for single-mismatched DNA detection using salt-induced hybridization. *Biosensors and Bioelectronics*, **2012**, 32, 127-32	11.8	24
102	Optimal design of scalable photo-bioreactor for phototropic culturing of Haematococcus pluvialis. *Bioprocess and Biosystems Engineering*, **2012**, 35, 309-15	3.7	29
101	Effects of L-arginine on refolding of lysine-tagged human insulin-like growth factor 1 expressed in Escherichia coli. *Bioprocess and Biosystems Engineering*, **2012**, 35, 255-63	3.7	7
100	Ultrasensitive detection of the reduced form of nicotinamide adenine dinucleotide based on carbon nanotube field effect transistor. *Analyst, The*, **2012**, 137, 3328-34	5	8
99	Signal enhancement of a micro-arrayed polydiacetylene (PDA) biosensor using gold nanoparticles. *Analyst, The*, **2012**, 137, 1241-6	5	23
98	Biomedical Applications: A Novel Bioassay Platform Using Ferritin-Based Nanoprobe Hydrogel (Adv. Mater. 35/2012). *Advanced Materials*, **2012**, 24, 4730-4730	24	
97	Astaxanthin production by a highly photosensitive Haematococcus mutant. *Process Biochemistry*, **2012**, 47, 1972-1979	4.8	24
96	Rational aspect ratio and suitable antibody coverage of gold nanorod for ultra-sensitive detection of a cancer biomarker. *Lab on A Chip*, **2012**, 12, 1102-9	7.2	74

95	Signal amplification by magnetic force on polydiacetylene supramolecules for detection of prostate cancer. *Small*, **2012**, 8, 209-13	11	26
94	Dark fermentation of hydrogen from waste glycerol using hyperthermophilic eubacterium Thermotoga neapolitana. *Environmental Progress and Sustainable Energy*, **2012**, 31, 466-473	2.5	20
93	A novel bioassay platform using ferritin-based nanoprobe hydrogel. *Advanced Materials*, **2012**, 24, 4739-44, 4730	24	30
92	Size-dependent plasmonic responses of single gold nanoparticles for analysis of biorecognition. *Analytical Biochemistry*, **2012**, 421, 213-8	3.1	23
91	A new method for non-labeling attomolar detection of diseases based on an individual gold nanorod immunosensor. *Lab on A Chip*, **2011**, 11, 2591-7	7.2	66
90	Apta-biosensors for nonlabeled real time detection of human IgE based on carbon nanotube field effect transistors. *Journal of Nanoscience and Nanotechnology*, **2011**, 11, 4182-7	1.3	8
89	Thermophilic hydrogen fermentation using Thermotoga neapolitana DSM 4359 by fed-batch culture. *International Journal of Hydrogen Energy*, **2011**, 36, 14014-14023	6.7	15
88	The strategy of signal amplification for ultrasensitive detection of hIgE based on aptamer-modified poly(di-acetylene) supramolecules. *Biosensors and Bioelectronics*, **2011**, 26, 4823-7	11.8	9
87	High-yield biohydrogen production from biodiesel manufacturing waste by Thermotoga neapolitana. *International Journal of Hydrogen Energy*, **2011**, 36, 5836-5842	6.7	76
86	A strategy for the ultrasensitive detection of cancer biomarkers based on the LSPR response of a single AuNP. *Journal of Nanoscience and Nanotechnology*, **2011**, 11, 5651-6	1.3	7
85	Aptamer biosensors for label-free colorimetric detection of human IgE based on polydiacetylene (PDA) supramolecules. *Journal of Nanoscience and Nanotechnology*, **2011**, 11, 4269-74	1.3	3
84	Controlled wavelength reduction in surface wrinkling of poly(dimethylsiloxane). *Soft Matter*, **2010**, 6, 677-684	3.6	58
83	Rigiflex lithography-based nanodot arrays for localized surface plasmon resonance biosensors. *Langmuir*, **2010**, 26, 6119-26	4	8
82	Enhancement of sensitivity using hybrid stimulus for the diagnosis of prostate cancer based on polydiacetylene (PDA) supramolecules. *Biosensors and Bioelectronics*, **2010**, 26, 1548-53	11.8	22
81	Fed-batch culture of astaxanthin-rich Haematococcus pluvialis by exponential nutrient feeding and stepwise light supplementation. *Bioprocess and Biosystems Engineering*, **2010**, 33, 133-9	3.7	34
80	Electrochemical analysis of gold-coated magnetic nanoparticles for detecting immunological interaction. *Journal of Nanoparticle Research*, **2010**, 12, 227-235	2.3	13
79	Thermophilic hydrogen fermentation from Korean rice straw by Thermotoga neapolitana. *International Journal of Hydrogen Energy*, **2010**, 35, 13392-13398	6.7	59
78	Repeated production of hydrogen by sulfate re-addition in sulfur deprived culture of Chlamydomonas reinhardtii. *International Journal of Hydrogen Energy*, **2010**, 35, 13387-13391	6.7	26

77	Enhancement of fermentative hydrogen production from green algal biomass of Thermotoga neapolitana by various pretreatment methods. *International Journal of Hydrogen Energy*, **2010**, 35, 13035-13040	6.7	75
76	Pretreatment of rice straw with ammonia and ionic liquid for lignocellulose conversion to fermentable sugars. *Bioresource Technology*, **2010**, 101, 7432-8	11	222
75	Hydrogen production of the hyperthermophilic eubacterium, Thermotoga neapolitana under N2 sparging condition. *Bioresource Technology*, **2010**, 101 Suppl 1, S38-41	11	71
74	Enzymatic pretreatment of Chlamydomonas reinhardtii biomass for ethanol production. *Bioresource Technology*, **2010**, 101, 5330-6	11	291
73	Quantitative detection of DNA by autocatalytic enlargement of hybridized gold nanoprobes. *Biosensors and Bioelectronics*, **2010**, 26, 511-6	11.8	14
72	Shear stress effect on transfection of neurons cultured in microfluidic devices. *Journal of Nanoscience and Nanotechnology*, **2009**, 9, 7330-5	1.3	13
71	A Direct, Multiplex Biosensor Platform for Pathogen Detection Based on Cross-linked Polydiacetylene (PDA) Supramolecules. *Advanced Functional Materials*, **2009**, 19, 3703-3710	15.6	61
70	Production of hydrogen from marine macro-algae biomass using anaerobic sewage sludge microflora. *Biotechnology and Bioprocess Engineering*, **2009**, 14, 307-315	3.1	70
69	Eco-toxicity of commercial silver nanopowders to bacterial and yeast strains. *Biotechnology and Bioprocess Engineering*, **2009**, 14, 490-495	3.1	42
68	Optical fiber SPR biosensor with sandwich assay for the detection of prostate specific antigen. *Optics Communications*, **2009**, 282, 2827-2830	2	80
67	Aptamer biosensor for lable-free detection of human immunoglobulin E based on surface plasmon resonance. *Sensors and Actuators B: Chemical*, **2009**, 139, 471-475	8.5	55
66	Functional fusion mutant of Candida antarctica lipase B (CalB) expressed in Escherichia coli. *Biochimica Et Biophysica Acta - Proteins and Proteomics*, **2009**, 1794, 519-25	4	18
65	Homogenous growth of gold nanocrystals for quantification of PSA protein biomarker. *Biosensors and Bioelectronics*, **2009**, 24, 1292-7	11.8	43
64	Enhancement of sensitivity and specificity by surface modification of carbon nanotubes in diagnosis of prostate cancer based on carbon nanotube field effect transistors. *Biosensors and Bioelectronics*, **2009**, 24, 3372-8	11.8	106
63	Detection of pathogen based on the catalytic growth of gold nanocrystals. *Water Research*, **2009**, 43, 1425-31	12.5	27
62	Sensitive DNA biosensor based on a long-period grating formed on the side-polished fiber surface. *Optics Express*, **2009**, 17, 3855-60	3.3	76
61	Ecotoxicity of silver nanoparticles on the soil nematode Caenorhabditis elegans using functional ecotoxicogenomics. *Environmental Science & Technology*, **2009**, 43, 3933-40	10.3	362
60	Phase controllable transfer printing of patterned polyelectrolyte multilayers. *Langmuir*, **2009**, 25, 2575-81	4	14

59	Resonant Rayleigh light scattering response of individual Au nanoparticles to antigen-antibody interaction. *Lab on A Chip*, **2009**, 9, 1836-9	7.2	47
58	Hydrothermal acid pretreatment of Chlamydomonas reinhardtii biomass for ethanol production. *Journal of Microbiology and Biotechnology*, **2009**, 19, 161-6	3.3	153
57	Surface plasmon resonance-based inhibition assay for real-time detection of Cryptosporidium parvum oocyst. *Water Research*, **2008**, 42, 1693-9	12.5	19
56	Non-labeled detection of waterborne pathogen Cryptosporidium parvum using a polydiacetylene-based fluorescence chip. *Biotechnology Journal*, **2008**, 3, 687-93	5.6	11
55	Production of Hydrogen from Glucose as a Biomass Simulant:Integrated Biological and Thermochemical Approach. *Industrial & Engineering Chemistry Research*, **2008**, 47, 3645-3651	3.9	27
54	A multisized piezoelectric microcantilever biosensor array for the quantitative analysis of mass and surface stress. *Applied Physics Letters*, **2008**, 93, 102902	3.4	34
53	Fabrication and testing of a PDMS multi-stacked hand-operated LOC for use in portable immunosensing systems. *Biomedical Microdevices*, **2008**, 10, 859-868	3.7	21
52	Heterologous production of epothilones B and D in Streptomyces venezuelae. *Applied Microbiology and Biotechnology*, **2008**, 81, 109-17	5.7	33
51	Direct extraction of astaxanthin from Haematococcus culture using vegetable oils. *Biotechnology Letters*, **2008**, 30, 441-4	3	77
50	Seedless synthesis of octahedral gold nanoparticles in condensed surfactant phase. *Journal of Colloid and Interface Science*, **2008**, 322, 152-7	9.3	31
49	Application of citrate-stabilized gold-coated ferric oxide composite nanoparticles for biological separations. *Journal of Magnetism and Magnetic Materials*, **2008**, 320, 2049-2055	2.8	109
48	Ultrasensitive carbon nanotube-based biosensors using antibody-binding fragments. *Analytical Biochemistry*, **2008**, 381, 193-8	3.1	124
47	Selective antigenntibody recognition on SPR sensor based on the heat-sensitive conformational change of poly(N-isopropylacrylamide). *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2008**, 313-314, 504-508	5.1	10
46	Electrochemical immunosensor signaling by employing enzyme-tagged antibody for the determination of antigen or antibody under single competition reaction format. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2008**, 313-314, 509-514	5.1	6
45	Optimization of hydrogen production by hyperthermophilic eubacteria, Thermotoga maritima and Thermotoga neapolitana in batch fermentation. *International Journal of Hydrogen Energy*, **2008**, 33, 1483-1488	6.7	74
44	Hydrogen production by the hyperthermophilic eubacterium, Thermotoga neapolitana, using cellulose pretreated by ionic liquid. *International Journal of Hydrogen Energy*, **2008**, 33, 5161-5168	6.7	52
43	Selective production of epothilone B by heterologous expression of propionyl-CoA synthetase in Sorangium cellulosum. *Journal of Microbiology and Biotechnology*, **2008**, 18, 135-7	3.3	10
42	Surface-initiated, atom transfer radical polymerization of oligo(ethylene glycol) methyl ether methacrylate and subsequent click chemistry for bioconjugation. *Biomacromolecules*, **2007**, 8, 744-9	6.9	126

41	The Development of a Generic Bioanalytical Matrix Using Polydiacetylenes. *Advanced Functional Materials*, **2007**, 17, 2038-2044	15.6	45
40	Improvement of epothilone B production by in situ removal of ammonium using cation exchange resin in Sorangium cellulosum culture. *Biochemical Engineering Journal*, **2007**, 37, 328-331	4.2	8
39	Fermentative hydrogen production by the newly isolated Enterobacter asburiae SNU-1. *International Journal of Hydrogen Energy*, **2007**, 32, 192-199	6.7	81
38	Signal enhancement of surface plasmon resonance immunoassay using enzyme precipitation-functionalized gold nanoparticles: a femto molar level measurement of anti-glutamic acid decarboxylase antibody. *Biosensors and Bioelectronics*, **2007**, 22, 1874-80	11.8	84
37	Selective extraction of free astaxanthin from Haematococcus culture using a tandem organic solvent system. *Biotechnology Progress*, **2007**, 23, 866-71	2.8	7
36	Complementary limiting factors of astaxanthin synthesis during photoautotrophic induction of Haematococcus pluvialis: C/N ratio and light intensity. *Applied Microbiology and Biotechnology*, **2007** , 74, 987-94	5.7	55
35	Enhanced stability of heterologous proteins by supramolecular self-assembly. *Applied Microbiology and Biotechnology*, **2007**, 75, 347-55	5.7	8
34	Preparation of Highly Stable Oligo(ethylene glycol) Derivatives-Functionalized Gold Nanoparticles and Their Application in LSPR-Based Detection of PSA/ACT Complex. *Journal of Nanoscience and Nanotechnology*, **2007**, 7, 3754-3757	1.3	10
33	Microfluidic Dialysis Device Fabrication for Protein Solution Enrichment and Its Enrichment Enhancement by Plasma Surface Treatment of a Membrane. *Journal of the Korean Physical Society*, **2007**, 51, 993	0.6	4
32	Selective Extraction of Free Astaxanthin fromHaematococcusCulture Using a Tandem Organic Solvent System. *Biotechnology Progress*, **2007**, 23, 866-871	2.8	28
31	Preparation of highly stable oligo(ethylene glycol) derivatives-functionalized gold nanoparticles and their application in LSPR-based detection of PSA/ACT complex. *Journal of Nanoscience and Nanotechnology*, **2007**, 7, 3754-7	1.3	1
30	Double-enhancement strategy: A practical approach to a femto-molar level detection of prostate specific antigen-alpha1-antichymotrypsin (PSA/ACT complex) for SPR immunosensing. *Journal of Microbiology and Biotechnology*, **2007**, 17, 1031-5	3.3	9
29	A strategy for sensitivity and specificity enhancements in prostate specific antigen-alpha1-antichymotrypsin detection based on surface plasmon resonance. *Biosensors and Bioelectronics*, **2006**, 21, 2106-13	11.8	121
28	Hydrogen production from Chlamydomonas reinhardtii biomass using a two-step conversion process: Anaerobic conversion and photosynthetic fermentation. *International Journal of Hydrogen Energy*, **2006**, 31, 812-816	6.7	156
27	Performance enhancement of real-time detection of protozoan parasite, Cryptosporidium oocyst by a modified surface plasmon resonance (SPR) biosensor. *Enzyme and Microbial Technology*, **2006**, 39, 387-390	3.8	37
26	Evaluation of conversion efficiency of light to hydrogen energy by Anabaena variabilis. *International Journal of Hydrogen Energy*, **2006**, 31, 721-727	6.7	51
25	Enhanced hydrogen production by controlling light intensity in sulfur-deprived Chlamydomonas reinhardtii culture. *International Journal of Hydrogen Energy*, **2006**, 31, 1585-1590	6.7	79
24	Astaxanthin biosynthesis from simultaneous N and P uptake by the green alga Haematococcus pluvialis in primary-treated wastewater. *Biochemical Engineering Journal*, **2006**, 31, 234-238	4.2	68

23	Glutamate decarboxylase-derived IDDM autoantigens displayed on self-assembled protein nanoparticles. *Biochemical and Biophysical Research Communications*, **2005**, 327, 604-8	3.4	3
22	Characterization of a self-assembled monolayer of thiol on a gold surface and the fabrication of a biosensor chip based on surface plasmon resonance for detecting anti-GAD antibody. *Biosensors and Bioelectronics*, **2005**, 20, 1422-7	11.8	102
21	Enhanced performance of a surface plasmon resonance immunosensor for detecting Ab-GAD antibody based on the modified self-assembled monolayers. *Biosensors and Bioelectronics*, **2005**, 21, 378-83	11.8	55
20	Comparison of heterotrophic and photoautotrophic induction on astaxanthin production by Haematococcus pluvialis. *Applied Microbiology and Biotechnology*, **2005**, 68, 237-41	5.7	115
19	Effect of air distributor on the fluidization characteristics in conical gas fluidized beds. *Korean Journal of Chemical Engineering*, **2005**, 22, 315-320	2.8	15
18	Synthesis and polymerization of methacryloyl-PEG-sulfonic acid as a functional macromer for biocompatible polymeric surfaces. *Macromolecular Research*, **2004**, 12, 379-383	1.9	9
17	Enhancement of the sensitivity of surface plasmon resonance (SPR) immunosensor for the detection of anti-GAD antibody by changing the pH for streptavidin immobilization. *Enzyme and Microbial Technology*, **2004**, 35, 683-687	3.8	13
16	Preparation and Properties of PHEA/Chitosan Composite Hydrogel. *Polymer Journal*, **2004**, 36, 943-948	2.7	24
15	Hydrocarbon production from secondarily treated piggery wastewater by the green alga Botryococcus braunii. *Journal of Applied Phycology*, **2003**, 15, 185-191	3.2	148
14	Process development for the removal of copper from wastewater using ferric/limestone treatment. *Korean Journal of Chemical Engineering*, **2003**, 20, 482-486	2.8	10
13	Dynamic characteristics of bed collapse in threephase fluidized beds. *Korean Journal of Chemical Engineering*, **2003**, 20, 1166-1169	2.8	1
12	Drying characteristics of particles using thermogravimetric analyzer. *Korean Journal of Chemical Engineering*, **2003**, 20, 1170-1175	2.8	8
11	Rheology and gelation of water-insoluble dextran from Leuconostoc mesenteroides NRRL B-523. *Carbohydrate Polymers*, **2003**, 53, 459-468	10.3	25
10	High cell density culture of Anabaena variabilis using repeated injections of carbon dioxide for the production of hydrogen. *International Journal of Hydrogen Energy*, **2002**, 27, 1265-1270	6.7	60
9	Increased poly-Ehydroxybutyrate (PHB) chain length by the modulation of PHA synthase activity in recombinant Escherichia coli. *Biotechnology Letters*, **2001**, 23, 2057-2061	3	14
8	Treatment of highly polluted groundwater by novel iron removal process. *Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering*, **2001**, 36, 25-38	2.3	6
7	Electrorheological suspensions of two polarizable particles. *Korean Journal of Chemical Engineering*, **1999**, 16, 338-342	2.8	2
6	Fed-batch hairy root cultures within situ separation. *Biotechnology and Bioprocess Engineering*, **1999** , 4, 106-111	3.1	6

5	PHA synthase activity controls the molecular weight and polydispersity of polyhydroxybutyrate in vivo. *Nature Biotechnology*, **1997**, 15, 63-7	44.5	172
4	Extractive plant cell culture. *Current Opinion in Biotechnology*, **1995**, 6, 209-212	11.4	12
3	Shikonin production by extractive cultivation in transformed-suspension and hairy root cultures of Lithospermum erythrorhizon. *Annals of the New York Academy of Sciences*, **1994**, 745, 442-54	6.5	10
2	Production and secretion of indole alkaloids in hairy root cultures of Catharanthus roseus: Effects of in situ adsorption, fungal elicitation and permeabilization. *Journal of Bioscience and Bioengineering*, **1994**, 78, 229-234		56
1	Increased shikonin production by hairy roots of Lithospermum erythrorhizon in two phase bubble column reactor. *Biotechnology Letters*, **1993**, 15, 145-150	3	40