

# Hideki Aoyagi

## List of Publications by Year in descending order

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106  
papers

2,892  
citations

257101

24  
h-index

189595

50  
g-index

113  
all docs

113  
docs citations

113  
times ranked

3335  
citing authors

#	ARTICLE	IF	CITATIONS
1	Photobioreactors for mass cultivation of algae. <i>Bioresource Technology</i> , 2008, 99, 4021-4028.	4.8	941
2	Symbiotic association in <i>Chlorella</i> culture. <i>FEMS Microbiology Ecology</i> , 2005, 51, 187-196.	1.3	139
3	Influence of irradiance, dissolved oxygen concentration, and temperature on the growth of <i>Chlorella sorokiniana</i> . <i>Photosynthetica</i> , 2007, 45, 309-311.	0.9	113
4	Endogenous elicitor-like effects of alginate on physiological activities of plant cells. <i>Applied Microbiology and Biotechnology</i> , 1999, 52, 429-436.	1.7	88
5	Efficient production of saikosaponins in <i>Bupleurum falcatum</i> root fragments combined with signal transducers. <i>Applied Microbiology and Biotechnology</i> , 2001, 57, 482-488.	1.7	77
6	Biosynthesis of Silver Nanoparticles Mediated by Extracellular Pigment from <i>Talaromyces purpurogenus</i> and Their Biomedical Applications. <i>Nanomaterials</i> , 2019, 9, 1042.	1.9	69
7	Influence of the diet components on the symbiotic microorganisms community in hindgut of <i>Coptotermes formosanus</i> Shiraki. <i>Applied Microbiology and Biotechnology</i> , 2006, 71, 907-917.	1.7	64
8	Classification of pollen species using autofluorescence image analysis. <i>Journal of Bioscience and Bioengineering</i> , 2009, 107, 90-94.	1.1	51
9	Influence of Feed Components on Symbiotic Bacterial Community Structure in the Gut of the Wood-Feeding Higher Termite <i>Nasutitermes takasagoensis</i> . <i>Bioscience, Biotechnology and Biochemistry</i> , 2007, 71, 1244-1251.	0.6	50
10	Effect of mixed organic substrate on $\hat{\alpha}$ -tocopherol production by <i>Euglena gracilis</i> in photoheterotrophic culture. <i>Applied Microbiology and Biotechnology</i> , 2008, 79, 371-378.	1.7	47
11	Optimization of chemically defined feed media for monoclonal antibody production in Chinese hamster ovary cells. <i>Journal of Bioscience and Bioengineering</i> , 2015, 120, 78-84.	1.1	43
12	Construction of an artificial symbiotic community using a <i>Chlorella</i> – <i>Chlorella</i> symbiont association as a model. <i>FEMS Microbiology Ecology</i> , 2008, 63, 273-282.	1.3	42
13	Development of a novel real-time pollen-sorting counter using species-specific pollen autofluorescence. <i>Aerobiologia</i> , 2010, 26, 99-111.	0.7	42
14	Indole alkaloids production by <i>Catharanthus roseus</i> protoplasts with artificial cell walls containing of guluronic acid rich alginate gel. <i>Journal of Bioscience and Bioengineering</i> , 1998, 85, 306-311.	0.9	30
15	Purification and characteristics of chitinase secreted by cultured <i>Wasabia japonica</i> cells. <i>Journal of Bioscience and Bioengineering</i> , 1995, 80, 148-152.	0.9	29
16	Application of plant protoplasts for the production of useful metabolites. <i>Biochemical Engineering Journal</i> , 2011, 56, 1-8.	1.8	29
17	Immobilization of a saccharifying raw starch hydrolyzing enzyme on functionalized and non-functionalized sepa beads. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2012, 78, 1-8.	1.8	29
18	Effect of temperature shift on levels of acidic charge variants in IgG monoclonal antibodies in Chinese hamster ovary cell culture. <i>Journal of Bioscience and Bioengineering</i> , 2015, 119, 700-705.	1.1	29

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19	Efficient production of chitinase by immobilized <i>Wasabia japonica</i> cells in double-layered gel fibers. <i>Journal of Bioscience and Bioengineering</i> , 1996, 81, 220-225.	0.9	28
20	Efficient production of chitinase by <i>Wasabia japonica</i> protoplasts immobilized in double-layered gel fibers. <i>Journal of Bioscience and Bioengineering</i> , 1996, 81, 394-399.	0.9	27
21	Efficient Paclitaxel Production using Protoplasts Isolated from Cultured Cells of <i>Taxus cuspidata</i> . <i>Planta Medica</i> , 2002, 68, 420-424.	0.7	27
22	Acetylation of loofa ( <i>Luffa cylindrica</i> ) sponge as immobilization carrier for bioprocesses involving cellulase. <i>Journal of Bioscience and Bioengineering</i> , 2007, 103, 311-317.	1.1	27
23	Stable antibacterial silver nanoparticles produced with seed-derived callus extract of <i>Catharanthus roseus</i> . <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 2018, 46, 1266-1273.	1.9	26
24	Turbidimetric measurement of cell biomass of plant cell suspensions. <i>Journal of Bioscience and Bioengineering</i> , 1992, 73, 130-134.	0.9	25
25	Development of novel method for screening microorganisms using symbiotic association between insect ( <i>Coptotermes formosanus</i> Shiraki) and intestinal microorganisms. <i>Journal of Bioscience and Bioengineering</i> , 2007, 103, 358-367.	1.1	24
26	Improved yield and stability of amylase by multipoint covalent binding on polyglutaraldehyde activated chitosan beads: Activation of denatured enzyme molecules by calcium ions. <i>Process Biochemistry</i> , 2013, 48, 1031-1038.	1.8	24
27	Utilization of Spent Sawdust Matrix after Cultivation of <i>Grifola frondosa</i> as Substrate for Ethanol Production by Simultaneous Saccharification and Fermentation. <i>Food Science and Technology Research</i> , 2007, 13, 111-117.	0.3	23
28	Development of a novel system for producing ajmalicine and serpentine using direct culture of leaves in <i>Catharanthus roseus</i> intact plant. <i>Journal of Bioscience and Bioengineering</i> , 2005, 99, 208-215.	1.1	22
29	A novel flat plate air-lift photobioreactor with inclined reflective broth circulation guide for improved biomass and lipid productivity by <i>Desmodesmus subspicatus</i> LC172266. <i>Journal of Applied Phycology</i> , 2017, 29, 2745-2754.	1.5	22
30	Microalgal Culture Systems: An Insight into their Designs, Operation and Applications. <i>Biotechnology</i> , 2012, 11, 127-132.	0.5	22
31	Alginate promotes production of various enzymes by <i>Catharanthus roseus</i> cells. <i>Plant Cell Reports</i> , 1998, 17, 243-247.	2.8	21
32	Evaluation of Chinese hamster ovary cell stability during repeated batch culture for large-scale antibody production. <i>Journal of Bioscience and Bioengineering</i> , 2010, 109, 274-280.	1.1	21
33	Promotion effect of alginate on chitinase production by <i>Wasabia japonica</i> . <i>Biotechnology Letters</i> , 1996, 10, 649.	0.5	20
34	Efficient production of active form of recombinant cassava hydroxynitrile lyase using <i>Escherichia coli</i> in low-temperature culture. <i>Applied Microbiology and Biotechnology</i> , 2008, 79, 563-569.	1.7	20
35	Chemical modification with phthalic anhydride and chitosan: Viable options for the stabilization of raw starch digesting amylase from <i>Aspergillus carbonarius</i> . <i>International Journal of Biological Macromolecules</i> , 2017, 99, 641-647.	3.6	20
36	Development of a novel artificial medium based on utilization of algal photosynthetic metabolites by symbiotic heterotrophs. <i>Journal of Applied Microbiology</i> , 2008, 105, 741-751.	1.4	19

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37	Phylogenetic Relationship of Symbiotic Archaea in the Gut of the Higher Termite <i>Nasutitermes takasagoensis</i> Fed with Various Carbon Sources. <i>Microbes and Environments</i> , 2007, 22, 157-164.	0.7	18
38	Changes in the quality of antibodies produced by Chinese hamster ovary cells during the death phase of cell culture. <i>Journal of Bioscience and Bioengineering</i> , 2010, 109, 281-287.	1.1	18
39	UV mutagenesis of <i>Cupriavidus necator</i> for extracellular production of (R)-3-hydroxybutyric acid. <i>Journal of Applied Microbiology</i> , 2008, 105, 236-242.	1.4	16
40	Synergistic effect of active oxygen species and alginate on chitinase production by <i>Wasabia japonica</i> cells and its application. <i>Journal of Bioscience and Bioengineering</i> , 2000, 89, 131-137.	1.1	15
41	Development of a circulation direct sampling and monitoring system for O <sub>2</sub> and CO <sub>2</sub> concentrations in the gas-liquid phases of shake-flask systems during microbial cell culture. <i>AMB Express</i> , 2017, 7, 163.	1.4	15
42	Practices of shake-flask culture and advances in monitoring CO <sub>2</sub> and O <sub>2</sub> . <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 4279-4289.	1.7	15
43	Citraconylation and maleylation on the catalytic and thermodynamic properties of raw starch saccharifying amylase from <i>Aspergillus carbonarius</i> . <i>Heliyon</i> , 2020, 6, e04351.	1.4	15
44	Invertase production by <i>Saccharomyces cerevisiae</i> protoplasts immobilized in strontium alginate gel beads. <i>Journal of Bioscience and Bioengineering</i> , 2000, 89, 498-500.	1.1	14
45	Measurement of fresh and dry densities of suspended plant cells and estimation of their water content. <i>Journal of Bioscience and Bioengineering</i> , 1992, 73, 490-496.	0.9	13
46	Stabilization of a raw starch digesting amylase from <i>Aspergillus carbonarius</i> via immobilization on activated and non-activated agarose gel. <i>World Journal of Microbiology and Biotechnology</i> , 2012, 28, 335-345.	1.7	13
47	Effect of tetrasodium pyrophosphate concentration and cooking time on the physicochemical properties of process cheese. <i>Journal of Dairy Science</i> , 2016, 99, 6983-6994.	1.4	13
48	Effect of intermittent opening of breathable culture plugs and aeration of headspace on the structure of microbial communities in shake-flask culture. <i>Journal of Bioscience and Bioengineering</i> , 2018, 126, 96-101.	1.1	13
49	Adsorption preference for divalent metal ions by <i>Lactobacillus casei</i> JCM1134. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 6155-6162.	1.7	13
50	Measurement of viable plant cell and protoplast concentrations with specialized fluorometer. <i>Journal of Bioscience and Bioengineering</i> , 1994, 77, 517-521.	0.9	12
51	Production of cell wall accumulative enzymes using immobilized protoplasts of <i>Catharanthus roseus</i> in agarose gel. <i>Biotechnology Letters</i> , 2003, 25, 1687-1693.	1.1	12
52	Influence of shading inclined tubular photobioreactor surfaces on biomass productivity of <i>C. sorokiniana</i> . <i>Photosynthetica</i> , 2008, 46, .	0.9	12
53	Effects of reactive oxygen species on $\alpha$ -tocopherol production in mitochondria and chloroplasts of <i>Euglena gracilis</i> . <i>Journal of Applied Phycology</i> , 2009, 21, 185-191.	1.5	12
54	Treatment of Palm Oil Mill Effluent by a Microbial Consortium Developed from Compost Soils. <i>International Scholarly Research Notices</i> , 2014, 2014, 1-8.	0.9	12

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55	Monitoring of CO <sub>2</sub> and O <sub>2</sub> concentrations in the headspace of Sakaguchi flasks during liquid culture of microorganism. <i>Applied Microbiology and Biotechnology</i> , 2018, 102, 6637-6645.	1.7	12
56	Estimation of microbial phosphate-accumulation abilities. <i>Scientific Reports</i> , 2019, 9, 4879.	1.6	12
57	Screening of Phosphate-accumulating Probiotics for Potential Use in Chronic Kidney Disorder. <i>Food Science and Technology Research</i> , 2019, 25, 89-96.	0.3	12
58	Immobilization of raw starch saccharifying amylase on glutaraldehyde activated chitin flakes increases the enzyme operation range. <i>Bioresource Technology Reports</i> , 2021, 13, 100645.	1.5	12
59	Estimation of cell biomass in plant cell suspensions by the osmotic pressure measurement of culture broth. <i>Journal of Bioscience and Bioengineering</i> , 1993, 76, 501-504.	0.9	11
60	A novel strategy for the synthesis of gold nanoparticles with <i>Catharanthus roseus</i> cell suspension culture. <i>Materials Letters</i> , 2019, 238, 317-320.	1.3	11
61	Efficient Production of Active Form Recombinant Cassava Hydroxynitrile Lyase Using <i>Escherichia coli</i> in Low-Temperature Culture. <i>Methods in Molecular Biology</i> , 2010, 643, 133-144.	0.4	11
62	Stabilization of a Raw-Starch-Digesting Amylase by Multipoint Covalent Attachment on Glutaraldehyde-Activated Amberlite Beads. <i>Journal of Microbiology and Biotechnology</i> , 2012, 22, 628-636.	0.9	11
63	Development of an optical method for monitoring protoplast formation from cultured plant cells. <i>Journal of Bioscience and Bioengineering</i> , 1993, 75, 201-206.	0.9	10
64	Comparative Analyses of the Gene Expression Profiles of <i>Arabidopsis</i> Intact Plant and Cultured Cells. <i>Biotechnology Letters</i> , 2005, 27, 1097-1103.	1.1	10
65	Effect of heat-generated product from uronic acids on the physiological activities of microbial cells and its application. <i>Bioresource Technology</i> , 2008, 99, 4534-4538.	4.8	10
66	Simultaneous accumulation of lipid and carotenoid in freshwater green microalgae <i>Desmodesmus subspicatus</i> LC172266 by nutrient replete strategy under mixotrophic condition. <i>Korean Journal of Chemical Engineering</i> , 2020, 37, 1522-1529.	1.2	10
67	Microbial community structure analysis in <i>Acer palmatum</i> bark and isolation of novel bacteria IAD-21 of the candidate division FBP. <i>PeerJ</i> , 2019, 7, e7876.	0.9	10
68	Preparation of mixed alginate elicitors with high activity for the efficient production of 5- $\alpha$ -phosphodiesterase by <i>Catharanthus roseus</i> cells. <i>Biotechnology Letters</i> , 2006, 28, 1567-1571.	1.1	9
69	Fullerene fine particles adhere to pollen grains and affect their autofluorescence and germination. <i>Nanotechnology, Science and Applications</i> , 2011, 4, 67.	4.6	9
70	Utilization of Broken Rice for the Production of Poly(3-hydroxybutyrate). <i>Journal of Polymers and the Environment</i> , 2012, 20, 254-257.	2.4	9
71	Immobilization of raw starch digesting amylase on silica gel: A comparative study. <i>African Journal of Biotechnology</i> , 2011, 10, .	0.3	9
72	Production of 5- $\alpha$ -phosphodiesterase by <i>Catharanthus roseus</i> cells promoted by heat-degraded products generated from uronic acid. <i>Journal of Bioscience and Bioengineering</i> , 2002, 94, 154-159.	1.1	8

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73	Lipase Production from Palm Oil Mill Effluent by <i>Aspergillus terreus</i> Immobilized on Luffa Sponge. <i>Journal of Applied Sciences</i> , 2013, 13, 5661-5671.	0.1	8
74	Analysis of gene expression in yeast protoplasts using DNA microarrays and their application for efficient production of invertase and $\beta$ -glucosidase. <i>Journal of Bioscience and Bioengineering</i> , 2004, 97, 169-183.	1.1	7
75	Development of a quantitative method for determination of the optimal conditions for protoplast isolation from cultured plant cells. <i>Biotechnology Letters</i> , 2006, 28, 1687-1694.	1.1	7
76	Analysis and effect of conventional flasks in shaking culture of <i>Escherichia coli</i> . <i>AMB Express</i> , 2020, 10, 77.	1.4	7
77	Optimization of the Thermal Dry Treatment To Enhance the Enzymatic Hydrolysis of a Spent-Sawdust Matrix Used for <i>Grifola frondosa</i> Cultivation. <i>Energy &amp; Fuels</i> , 2008, 22, 120-122.	2.5	6
78	Analysis of the influence of flame sterilization included in sampling operations on shake-flask cultures of microorganisms. <i>Scientific Reports</i> , 2020, 10, 10385.	1.6	6
79	Estimation of microbial cell concentration in suspension culture by the osmotic pressure measurement of culture broth. <i>Biotechnology Letters</i> , 1995, 9, 429-434.	0.5	5
80	Title is missing!. , 1999, 13, 253-258.		5
81	Secretory production of cell wall components by <i>Saccharomyces cerevisiae</i> protoplasts in static liquid culture. <i>Biotechnology Letters</i> , 2012, 34, 695-700.	1.1	5
82	Simple method for analyzing the purity of protease-containing samples by acid-treatment SDS-PAGE. <i>Journal of Bioscience and Bioengineering</i> , 2019, 128, 630-635.	1.1	5
83	A High Throughput Isolation Method for Phosphate-Accumulating Organisms. <i>Scientific Reports</i> , 2019, 9, 18083.	1.6	5
84	Comparison of growth, protein and carotenoid contents of some freshwater microalgae and the effects of urea and cultivation in a photobioreactor with reflective broth circulation guide on <i>Desmodesmus subspicatus</i> LC172266. <i>Brazilian Journal of Chemical Engineering</i> , 0, , 1.	0.7	5
85	Thermal and UV Degradation Kinetics of Water-Soluble Extracellular Pigment Produced by <i>Talaromyces purpurogenus</i> . <i>Food and Bioprocess Technology</i> , 2022, 15, 606-619.	2.6	5
86	Development of an apparatus for monitoring protoplast isolation from plant tissues based on both dielectric and optical methods. <i>Journal of Bioscience and Bioengineering</i> , 1999, 87, 762-768.	1.1	4
87	Enhancement of microbubble generation in a pressurized dissolution process by packing the nozzle with porous ceramics. <i>Water Science and Technology</i> , 2012, 65, 69-75.	1.2	4
88	Simplified preparation of crude and functional coagulogen by thermal inactivation of serine proteases in <i>Limulus</i> amoebocyte lysate and its application for rapid endotoxin determination. <i>Journal of Bioscience and Bioengineering</i> , 2012, 113, 406-411.	1.1	4
89	Analysis of porous breathable stopper and development of PID control for gas phase during shake-flask culture with microorganisms. <i>Applied Microbiology and Biotechnology</i> , 2020, 104, 8925-8936.	1.7	4
90	Production and stability of pigments by <i>Talaromyces purpurogenus</i> LC128689 in an alternating air phase-liquid phase cultivation system. <i>Biotechnology and Applied Biochemistry</i> , 2021, , .	1.4	4

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91	Production of 5'-phosphodiesterase by <i>Catharanthus roseus</i> cells promoted by heat-degraded products generated from uronic acid. <i>Journal of Bioscience and Bioengineering</i> , 2002, 94, 154-9.	1.1	4
92	Effect of physicochemical factors on extracellular fungal pigment-mediated biofabrication of silver nanoparticles. <i>Green Chemistry Letters and Reviews</i> , 2022, 15, 276-286.	2.1	4
93	Effects of low-shear modeled microgravity on a microbial community filtered through a 0.2- $\mu$ m filter and its potential application in screening for novel microorganisms. <i>Journal of Bioscience and Bioengineering</i> , 2012, 114, 73-79.	1.1	3
94	Determination of available breaking stress of agar and gellan gum plate culture methods and the duration of bacterial culture under strong acidic conditions. <i>Journal of Applied Microbiology</i> , 2021, 130, 157-164.	1.4	3
95	Title is missing!. <i>Biotechnology Letters</i> , 2002, 24, 1125-1129.	1.1	2
96	Development of an efficient method for screening microorganisms by using symbiotic association between <i>Nasutitermes takasagoensis</i> and intestinal microorganisms. <i>Applied Microbiology and Biotechnology</i> , 2007, 75, 1437-1446.	1.7	2
97	Production of secretory cutinase by recombinant <i>Saccharomyces cerevisiae</i> protoplasts. <i>SpringerPlus</i> , 2016, 5, 160.	1.2	2
98	Tailored synbiotic powder (functional food) to prevent hyperphosphataemia (kidney disorder). <i>Scientific Reports</i> , 2021, 11, 16485.	1.6	2
99	Screening for lectin-like protein-producing microorganisms based on cell surface proteins. <i>Canadian Journal of Microbiology</i> , 2011, 57, 78-83.	0.8	1
100	Development of a bellows pumping device for enhancing ventilation to shake-flask systems. <i>Biochemical Engineering Journal</i> , 2021, 174, 108098.	1.8	1
101	Development of a device for cultivation and isolation of microbes using a specialized cellulose film. <i>Journal of Microbiological Methods</i> , 2022, 195, 106450.	0.7	1
102	Fungal Pigment-Assisted Silver Nanoparticle Synthesis and Their Antimicrobial and Cytotoxic Potential. <i>Methods in Molecular Biology</i> , 2022, 2469, 65-78.	0.4	1
103	Use of <i>Catharanthus roseus</i> Cell Cultures for the Synthesis of Metal Nanoparticles. <i>Methods in Molecular Biology</i> , 2022, 2469, 55-64.	0.4	1
104	Turbidimetric method for evaluation of photocatalytic activities of suspended fine particles. <i>Nanotechnology, Science and Applications</i> , 2010, 3, 85.	4.6	0
105	Analysis of Gene Expression in Yeast Protoplasts Using DNA Microarrays and Their Application for Efficient Production of Invertase and $\alpha$ -Glucosidase. <i>Journal of Bioscience and Bioengineering</i> , 2004, 97, 169-183.	1.1	0
106	Control of carbon dioxide concentration in headspace of multiple flasks using both non-electric bellows pump and shaking incubator. <i>Journal of Bioscience and Bioengineering</i> , 2022, , .	1.1	0