

# Wakako Tsugawa

## List of Publications by Year in descending order

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Version: 2024-02-01

101  
papers

2,161  
citations

186265

28  
h-index

289244

40  
g-index

102  
all docs

102  
docs citations

102  
times ranked

1416  
citing authors

#	ARTICLE	IF	CITATIONS
1	Transient potentiometry based d-serine sensor using engineered d-amino acid oxidase showing quasi-direct electron transfer property. <i>Biosensors and Bioelectronics</i> , 2022, 200, 113927.	10.1	7
2	Rapid and homogeneous electrochemical detection by fabricating a high affinity bispecific antibody-enzyme complex using two Catcher/Tag systems. <i>Biosensors and Bioelectronics</i> , 2021, 175, 112885.	10.1	12
3	Development of an Interdigitated Electrode-Based Disposable Enzyme Sensor Strip for Glycated Albumin Measurement. <i>Molecules</i> , 2021, 26, 734.	3.8	18
4	Strategic design and improvement of the internal electron transfer of heme b domain-fused glucose dehydrogenase for use in direct electron transfer-type glucose sensors. <i>Biosensors and Bioelectronics</i> , 2021, 176, 112911.	10.1	18
5	Rational design of direct electron transfer type l-lactate dehydrogenase for the development of multiplexed biosensor. <i>Biosensors and Bioelectronics</i> , 2021, 176, 112933.	10.1	40
6	A self-powered glucose sensor based on BioCapacitor principle with micro-sized enzyme anode employing direct electron transfer type FADGDH. <i>JPhys Energy</i> , 2021, 3, 034009.	5.3	5
7	Development of glycated peptide enzyme sensor based flow injection analysis system for haemoglobin A1c monitoring using quasi-direct electron transfer type engineered fructosyl peptide oxidase. <i>Biosensors and Bioelectronics</i> , 2021, 177, 112984.	10.1	12
8	Continuous electrochemical monitoring of L-glutamine using redox-probe-modified L-glutamine-binding protein based on intermittent pulse amperometry. <i>Sensors and Actuators B: Chemical</i> , 2021, 346, 130554.	7.8	7
9	Rapid, convenient, and highly sensitive detection of human hemoglobin in serum using a high-affinity bivalent antibody-enzyme complex. <i>Talanta</i> , 2021, 234, 122638.	5.5	10
10	Rational engineering of <i>Aerococcus viridans</i> l-lactate oxidase for the mediator modification to achieve quasi-direct electron transfer type lactate sensor. <i>Biosensors and Bioelectronics</i> , 2020, 151, 111974.	10.1	43
11	Creation of a novel DET type FAD glucose dehydrogenase harboring <i>Escherichia coli</i> derived cytochrome b562 as an electron transfer domain. <i>Biochemical and Biophysical Research Communications</i> , 2020, 530, 82-86.	2.1	14
12	Employment of 1-Methoxy-5-Ethyl Phenazinium Ethyl Sulfate as a Stable Electron Mediator in Flavin Oxidoreductases-Based Sensors. <i>Sensors</i> , 2020, 20, 2825.	3.8	5
13	Alteration of Electron Acceptor Preferences in the Oxidative Half-Reaction of Flavin-Dependent Oxidases and Dehydrogenases. <i>International Journal of Molecular Sciences</i> , 2020, 21, 3797.	4.1	13
14	Engineered Glucose Oxidase Capable of Quasi-Direct Electron Transfer after a Quick-and-Easy Modification with a Mediator. <i>International Journal of Molecular Sciences</i> , 2020, 21, 1137.	4.1	46
15	The Continuous 3 Month Operation of Open Circuit Potential Based Glucose Sensor Employing Direct Electron Transfer Type Fad Dependent Glucose Dehydrogenase. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 2779-2779.	0.0	0
16	Designer fungus FAD glucose dehydrogenase capable of direct electron transfer. <i>Biosensors and Bioelectronics</i> , 2019, 123, 114-123.	10.1	39
17	G-Quadruplex Structure Improves the Immunostimulatory Effects of CpG Oligonucleotides. <i>Nucleic Acid Therapeutics</i> , 2019, 29, 224-229.	3.6	19
18	Third generation impedimetric sensor employing direct electron transfer type glucose dehydrogenase. <i>Biosensors and Bioelectronics</i> , 2019, 129, 189-197.	10.1	36

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19	Development of a third-generation glucose sensor based on the open circuit potential for continuous glucose monitoring. <i>Biosensors and Bioelectronics</i> , 2019, 124-125, 216-223.	10.1	68
20	Affinity sensor for haemoglobin A1c based on single-walled carbon nanotube field-effect transistor and fructosyl amino acid binding protein. <i>Biosensors and Bioelectronics</i> , 2019, 129, 254-259.	10.1	29
21	X-ray structure of the direct electron transfer-type FAD glucose dehydrogenase catalytic subunit complexed with a hitchhiker protein. <i>Acta Crystallographica Section D: Structural Biology</i> , 2019, 75, 841-851.	2.3	18
22	Elucidation of the intra- and inter-molecular electron transfer pathways of glucoside 3-dehydrogenase. <i>Bioelectrochemistry</i> , 2018, 122, 115-122.	4.6	6
23	Development of a glucose sensor employing quick and easy modification method with mediator for altering electron acceptor preference. <i>Bioelectrochemistry</i> , 2018, 121, 185-190.	4.6	47
24	The electrochemical behavior of a FAD dependent glucose dehydrogenase with direct electron transfer subunit by immobilization on self-assembled monolayers. <i>Bioelectrochemistry</i> , 2018, 121, 1-6.	4.6	39
25	Minimizing the effects of oxygen interference on L-lactate sensors by a single amino acid mutation in <i>Aerococcus viridans</i> L-lactate oxidase. <i>Biosensors and Bioelectronics</i> , 2018, 103, 163-170.	10.1	29
26	Convenient and Universal Fabrication Method for Antibody-Enzyme Complexes as Sensing Elements Using the SpyCatcher/SpyTag System. <i>Analytical Chemistry</i> , 2018, 90, 14500-14506.	6.5	22
27	Construction and characterization of flavin adenine dinucleotide glucose dehydrogenase complex harboring a truncated electron transfer subunit. <i>Electrochimica Acta</i> , 2018, 277, 276-286.	5.2	16
28	Mutagenesis Study of the Cytochrome c Subunit Responsible for the Direct Electron Transfer-Type Catalytic Activity of FAD-Dependent Glucose Dehydrogenase. <i>International Journal of Molecular Sciences</i> , 2018, 19, 931.	4.1	14
29	Engineered fungus derived FAD-dependent glucose dehydrogenase with acquired ability to utilize hexaammineruthenium(III) as an electron acceptor. <i>Bioelectrochemistry</i> , 2018, 123, 62-69.	4.6	15
30	Synthesis of a hemin-containing copolymer as a novel immunostimulator that induces IFN-gamma production. <i>International Journal of Nanomedicine</i> , 2018, Volume 13, 4461-4472.	6.7	2
31	Development of a screen-printed carbon electrode based disposable enzyme sensor strip for the measurement of glycated albumin. <i>Biosensors and Bioelectronics</i> , 2017, 88, 167-173.	10.1	30
32	Novel fungal FAD glucose dehydrogenase derived from <i>Aspergillus niger</i> for glucose enzyme sensor strips. <i>Biosensors and Bioelectronics</i> , 2017, 87, 305-311.	10.1	46
33	Continuous operation of an ultra-low-power microcontroller using glucose as the sole energy source. <i>Biosensors and Bioelectronics</i> , 2017, 93, 335-339.	10.1	21
34	Mediator Preference of Two Different FAD-Dependent Glucose Dehydrogenases Employed in Disposable Enzyme Glucose Sensors. <i>Sensors</i> , 2017, 17, 2636.	3.8	29
35	Electrochemical sensing system employing fructosamine 6-phosphokinase enables glycated albumin measurement requiring no proteolytic digestion. <i>Biotechnology Journal</i> , 2016, 11, 797-804.	3.5	18
36	An Fe-S cluster in the conserved Cys-rich region in the catalytic subunit of FAD-dependent dehydrogenase complexes. <i>Bioelectrochemistry</i> , 2016, 112, 178-183.	4.6	31

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37	BioCapacitor: A novel principle for biosensors. <i>Biosensors and Bioelectronics</i> , 2016, 76, 20-28.	10.1	80
38	Advancing the Development of Glycated Protein Biosensing Technology. <i>Journal of Diabetes Science and Technology</i> , 2015, 9, 183-191.	2.2	10
39	The development of an autonomous self-powered bio-sensing actuator. <i>Sensors and Actuators B: Chemical</i> , 2014, 196, 429-433.	7.8	23
40	Engineering glucose oxidase to minimize the influence of oxygen on sensor response. <i>Electrochimica Acta</i> , 2014, 126, 158-161.	5.2	41
41	Cloning and Characterization of Fructosamine-6-Kinase from <i>Arthrobacter aurescens</i> . <i>Applied Biochemistry and Biotechnology</i> , 2013, 170, 710-717.	2.9	6
42	Engineering Fructosyl Peptide Oxidase to Improve Activity Toward the Fructosyl Hexapeptide Standard for HbA1c Measurement. <i>Molecular Biotechnology</i> , 2013, 54, 939-943.	2.4	17
43	Identification and functional analysis of fructosyl amino acid-binding protein from Gram-positive bacterium <i>Arthrobacter</i> sp.. <i>Journal of Applied Microbiology</i> , 2013, 114, 1449-1456.	3.1	4
44	Substrate specificity engineering of <i>Escherichia coli</i> derived fructosamine 6-kinase. <i>Biotechnology Letters</i> , 2013, 35, 253-258.	2.2	7
45	Mutational analysis of the oxygen-binding site of cholesterol oxidase and its impact on dye-mediated dehydrogenase activity. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2013, 88, 41-46.	1.8	14
46	Sensitive Electrochemical ATP Assay Combined with Enzymatic ATP Amplification Reaction. <i>Electrochemistry</i> , 2012, 80, 334-336.	1.4	1
47	Nitrous Oxide Sensing using Oxygen-Insensitive Direct-Electron-Transfer-Type Nitrous Oxide Reductase. <i>Electrochemistry</i> , 2012, 80, 371-374.	1.4	8
48	Glucose Monitoring by Direct Electron Transfer Needle-Type Miniaturized Electrode. <i>Electrochemistry</i> , 2012, 80, 375-378.	1.4	3
49	BioLC-Oscillator: A Self-Powered Wireless Glucose-Sensing System with the Glucose Dependent Resonance Frequency. <i>Electrochemistry</i> , 2012, 80, 367-370.	1.4	18
50	Construction of Mutant Glucose Oxidases with Increased Dye-Mediated Dehydrogenase Activity. <i>International Journal of Molecular Sciences</i> , 2012, 13, 14149-14157.	4.1	34
51	Construction of engineered fructosyl peptidyl oxidase for enzyme sensor applications under normal atmospheric conditions. <i>Biotechnology Letters</i> , 2012, 34, 491-497.	2.2	31
52	Tuning Fructosyl Peptidyl Oxidase into Dehydrogenase and Its Application for the Construction of an Enzyme Electrode. <i>ECS Transactions</i> , 2011, 35, 113-116.	0.5	1
53	BioRadioTransmitter: A Self-Powered Wireless Glucose-Sensing System. <i>Journal of Diabetes Science and Technology</i> , 2011, 5, 1030-1035.	2.2	52
54	Wireless monitoring of blood glucose levels in flatfish with a needle biosensor. <i>Fisheries Science</i> , 2010, 76, 687-694.	1.6	17

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55	Engineering of dye-mediated dehydrogenase property of fructosyl amino acid oxidases by site-directed mutagenesis studies of its putative proton relay system. <i>Biotechnology Letters</i> , 2010, 32, 1123-1129.	2.2	26
56	Motif-based search for a novel fructosyl peptide oxidase from genome databases. <i>Biotechnology and Bioengineering</i> , 2010, 106, 358-366.	3.3	14
57	Enzyme Fuel Cell for Cellulolytic Sugar Conversion Employing FAD Glucose Dehydrogenase and Carbon Cloth Electrode Based on Direct Electron Transfer Principle. <i>The Open Electrochemistry Journal</i> , 2010, 2, 6-10.	0.5	10
58	Development of Nitrous Oxide Enzyme Sensor Based on Direct Electron Transfer. <i>ECS Meeting Abstracts</i> , 2009, .	0.0	0
59	BioRadioTransmitter – A Self-empowered Wireless Glucose Sensing System. <i>ECS Meeting Abstracts</i> , 2009, .	0.0	0
60	Novel Enzyme Sensor for Glycated Protein Biosensing without the Proteolytic Processes. <i>ECS Meeting Abstracts</i> , 2009, .	0.0	1
61	Review of Fructosyl Amino Acid Oxidase Engineering Research: A Glimpse into the Future of Hemoglobin A1c Biosensing. <i>Journal of Diabetes Science and Technology</i> , 2009, 3, 585-592.	2.2	51
62	BioCapacitor – A novel category of biosensor. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1837-1842.	10.1	71
63	The construction of a glucose-sensing luciferase. <i>Biosensors and Bioelectronics</i> , 2009, 25, 76-81.	10.1	20
64	Cumulative effect of amino acid substitution for the development of fructosyl valine-specific fructosyl amine oxidase. <i>Enzyme and Microbial Technology</i> , 2009, 44, 52-56.	3.2	23
65	Wireless enzyme sensor system for real-time monitoring of blood glucose levels in fish. <i>Biosensors and Bioelectronics</i> , 2009, 24, 1417-1423.	10.1	59
66	Development of fructosyl amine oxidase specific to fructosyl valine by site-directed mutagenesis. <i>Protein Engineering, Design and Selection</i> , 2008, 21, 233-239.	2.1	30
67	Propionate Sensor Using Coenzyme-A Transferase and Acyl-CoA Oxidase. <i>Protein and Peptide Letters</i> , 2008, 15, 779-781.	0.9	6
68	Novel fluorescent sensing system for $\alpha$ -fructosyl amino acids based on engineered fructosyl amino acid binding protein. <i>Biosensors and Bioelectronics</i> , 2007, 22, 1933-1938.	10.1	17
69	A novel wireless glucose sensor employing direct electron transfer principle based enzyme fuel cell. <i>Biosensors and Bioelectronics</i> , 2007, 22, 2250-2255.	10.1	103
70	Active site analysis of fructosyl amine oxidase using homology modeling and site-directed mutagenesis. <i>Biotechnology Letters</i> , 2006, 28, 1895-1900.	2.2	28
71	Isolation and characterization of a fructosyl-amine oxidase from an <i>Arthrobacter</i> sp.. <i>Biotechnology Letters</i> , 2005, 27, 27-32.	2.2	27
72	Cloning and Expression of Fructosyl-amine Oxidase from Marine Yeast <i>Pichia</i> Species N1-1. <i>Marine Biotechnology</i> , 2004, 6, 625-632.	2.4	15

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73	Relationship Between Serum N-Carbamoyl-D-glucopyranosylamine Level and Renal Failure. <i>Renal Failure</i> , 2003, 25, 115-121.	2.1	0
74	Amperometric Glucose Sensor Using Thermostable Co-Factor Binding Glucose Dehydrogenase. <i>IEEJ Transactions on Sensors and Micromachines</i> , 2003, 123, 185-189.	0.1	8
75	Development of Highly-sensitive Fructosyl-valine Enzyme Sensor Employing Recombinant Fructosyl Amine Oxidase. <i>Electrochemistry</i> , 2003, 71, 442-445.	1.4	19
76	MULTI-SUGAR ANALYSIS SYSTEM USING A NOVEL GLUCOSE-3-DEHYDROGENASE ELECTRODE. <i>Instrumentation Science and Technology</i> , 2002, 30, 97-105.	1.8	2
77	Clinical application of the serum 1,5-anhydroglucitol assay method using glucose 3-dehydrogenase. <i>Journal of Clinical Laboratory Analysis</i> , 2002, 16, 299-303.	2.1	8
78	Development of a flow-injection analysis (FIA) enzyme sensor for fructosyl amine monitoring. <i>Analytical and Bioanalytical Chemistry</i> , 2002, 373, 211-214.	3.7	50
79	Cloning and Expression of Glucose 3-Dehydrogenase from <i>Halomonas</i> sp. 15 in <i>Escherichia coli</i> . <i>Biochemical and Biophysical Research Communications</i> , 2001, 282, 21-27.	2.1	10
80	Enzymatic synthesis of a novel trehalose derivative, 3,3'-diketotrehalose, and its potential application as the trehalase enzyme inhibitor. <i>FEBS Letters</i> , 2001, 489, 42-45.	2.8	14
81	Screening and Characterization of Fructosyl-Valine-Utilizing Marine Microorganisms. <i>Marine Biotechnology</i> , 2001, 3, 126-132.	2.4	35
82	Biodegradation of Formaldehyde by a Formaldehyde-Resistant Bacterium Isolated from Seawater. <i>Applied Biochemistry and Biotechnology</i> , 2001, 91-93, 213-218.	2.9	27
83	A new concept for the construction of an artificial dehydrogenase for fructosylamine compounds and its application for an amperometric fructosylamine sensor. <i>Analytica Chimica Acta</i> , 2001, 435, 151-156.	5.4	35
84	Fructosyl Amine Sensing Based on Prussian Blue Modified Enzyme Electrode. <i>Electrochemistry</i> , 2001, 69, 973-975.	1.4	22
85	Improvement of Enantioselectivity of Chiral Organophosphate Insecticide Hydrolysis by Bacterial Phosphotriesterase. <i>Applied Biochemistry and Biotechnology</i> , 2000, 84-86, 311-318.	2.9	8
86	Enzyme Electrochemical Preparation of a 3-Keto Derivative of 1,5-Anhydro-D-Glucitol Using Glucose-3-Dehydrogenase. <i>Applied Biochemistry and Biotechnology</i> , 2000, 84-86, 947-954.	2.9	3
87	Development of an Enzyme Sensor Utilizing a Novel Fructosyl Amine Oxidase from a Marine Yeast. <i>Electrochemistry</i> , 2000, 68, 869-871.	1.4	37
88	Construction and Characterization of Glucose Enzyme Sensor Employing Engineered Water Soluble PQQ Glucose Dehydrogenase with Improved Thermal Stability. <i>Electrochemistry</i> , 2000, 68, 907-911.	1.4	16
89	Enzyme Electrochemical Preparation of a 3-Keto Derivative of 1, 5-Anhydro-D-Glucitol Using Glucose-3-Dehydrogenase. , 2000, , 947-954.		0
90	Increased thermal stability of glucose dehydrogenase by cross-linking chemical modification. <i>Biotechnology Letters</i> , 1999, 21, 199-202.	2.2	25

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91	Subunit Analyses of a Novel Thermostable Glucose Dehydrogenase Showing Different Temperature Properties According to Its Quaternary Structure. <i>Applied Biochemistry and Biotechnology</i> , 1999, 77, 325-336.	2.9	29
92	Effect of Growth Substrates on Production of New Soluble Glucose 3-Dehydrogenase in <i>Halomonas (Deleya) sp. 1±-15</i> . <i>Applied Biochemistry and Biotechnology</i> , 1999, 79, 827-834.	2.9	10
93	Subunit Analyses of a Novel Thermostable Glucose Dehydrogenase Showing Different Temperature Properties According to Its Quaternary Structure. , 1999, , 325-335.		3
94	Effect of Growth Substrates on Production of New Soluble Glucose 3-Dehydrogenase in <i>Halomonas (Deleya) sp. 1±-15</i> . , 1999, , 827-834.		0
95	Fluorescent measurement of 1,5-anhydro-d-glucitol based on a novel marine bacterial glucose dehydrogenase. <i>Enzyme and Microbial Technology</i> , 1998, 22, 269-274.	3.2	19
96	Alteration of Substrate Specificity of Galactose Oxidase by Chemical Cross-linking. <i>Electrochemistry</i> , 1997, 65, 435-439.	0.3	1
97	Purification of a marine bacterial glucose dehydrogenase from <i>Cytophaga marinoflava</i> and its application for measurement of 1,5-anhydro-d-glucitol. <i>Applied Biochemistry and Biotechnology</i> , 1996, 56, 301-310.	2.9	26
98	A novel thermostable glucose dehydrogenase varying temperature properties by altering its quaternary structures. <i>Enzyme and Microbial Technology</i> , 1996, 19, 82-85.	3.2	55
99	Development of a Novel Conductometric Determination of Organophosphate Insecticides Using Phosphotriesterase. <i>Electrochemistry</i> , 1996, 64, 1234-1238.	0.3	3
100	Effect of PQQ glucose dehydrogenase overexpression in <i>Escherichia coli</i> on sugar-dependent respiration. <i>Journal of Biotechnology</i> , 1995, 43, 41-44.	3.8	4
101	A Marine Bacterial Electrode for Sensitive Detection of 1, 5-anhydro-D-glucitol. <i>Electrochemistry</i> , 1995, 63, 1131-1133.	0.3	0