Akihiko Nakamura

List of Publications by Year
in descending order

34 papers	690 citations	623574 14 h-index	580701 25 g-index
36 all docs	36 docs citations	36 times ranked	901 citing authors

#	Article	IF	Citations
1	Label-free monitoring of crystalline chitin hydrolysis by chitinase based on Raman spectroscopy. Analyst, The, 2021, 146, 4087-4094.	1.7	4
2	Role of Tryptophan 38 in Loading Substrate Chain into the Active-site Tunnel of Cellobiohydrolase I from <i>Trichoderma reesei</i>. Journal of Applied Glycoscience (1999), 2021, 68, 19-29.	0.3	2
3	Positive Charge Introduction on the Surface of Thermostabilized PET Hydrolase Facilitates PET Binding and Degradation. ACS Catalysis, 2021, 11, 8550-8564.	5.5	39
4	Convergent evolution of processivity in bacterial and fungal cellulases. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19896-19903.	3.3	31
5	Combined Approach to Engineer a Highly Active Mutant of Processive Chitinase Hydrolyzing Crystalline Chitin. ACS Omega, 2020, 5, 26807-26816.	1.6	3
6	Domain architecture divergence leads to functional divergence in binding and catalytic domains of bacterial and fungal cellobiohydrolases. Journal of Biological Chemistry, 2020, 295, 14606-14617.	1.6	11
7	Chemical-State-Dependent Free Energy Profile from Single-Molecule Trajectories of Biomolecular Motors: Application to Processive Chitinase. Journal of Physical Chemistry B, 2020, 124, 6475-6487.	1.2	3
8	Single-molecule imaging analysis reveals the mechanism of a high-catalytic-activity mutant of chitinase A from Serratia marcescens. Journal of Biological Chemistry, 2020, 295, 1915-1925.	1.6	12
9	Small stepping motion of processive dynein revealed by load-free high-speed single-particle tracking. Scientific Reports, 2020, 10, 1080.	1.6	10
10	Crystalline chitin hydrolase is a burnt-bridge Brownian motor. Biophysics and Physicobiology, 2020, 17, 51-58.	0.5	5
11	[Review] Moving Mechanism of Chitinase A from <i>Serratia marcescens</i>. Bulletin of Applied Glycoscience, 2020, 10, 89-95.	0.0	0
12	Multicolor High-Speed Tracking of Single Biomolecules with Silver, Gold, and Silverâ€“Gold Alloy Nanoparticles. ACS Photonics, 2019, 6, 2870-2883.	3.2	17
13	Chitinase Moves on and Degradates Crystalline Chitin with Brownian Motion. Seibutsu Butsuri, 2019, 59, 330-333.	0.0	0
14	Rate constants, processivity, and productive binding ratio of chitinase A revealed by single-molecule analysis. Physical Chemistry Chemical Physics, 2018, 20, 3010-3018.	1.3	24
15	Single-molecule imaging and manipulation of biomolecular machines and systems. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 241-252.	1.1	12
16	Single-Nanoparticle Tracking with Angstrom Localization Precision and Microsecond Time Resolution. Biophysical Journal, 2018, 115, 2413-2427.	0.2	28
17	Visualization of Functional Structure and Kinetic Dynamics of Cellulases. Advances in Experimental Medicine and Biology, 2018, 1104, 201-217.	0.8	2
18	Processive chitinase is Brownian monorail operated by fast catalysis after peeling rail from crystalline chitin. Nature Communications, 2018, 9, 3814.	5.8	50

#	Article	IF	Citations
19	Plasmid-Based One-Pot Saturation Mutagenesis and Robot-Based Automated Screening for Protein Engineering. ACS Omega, 2018, 3, 7715-7726.	1.6	7
20	Crystal structure of a family 6 cellobiohydrolase from the basidiomycetePhanerochaete chrysosporium. Acta Crystallographica Section F, Structural Biology Communications, 2017, 73, 398-403.	0.4	8
21	Development of simple random mutagenesis protocol for the protein expression system in Pichia pastoris. Biotechnology for Biofuels, 2016, 9, 199.	6.2	22
22	The use of neutron scattering to determine the functional structure of glycoside hydrolase. Current Opinion in Structural Biology, 2016, 40, 54-61.	2.6	2
23	Single-molecule Imaging Analysis of Binding, Processive Movement, and Dissociation of Cellobiohydrolase Trichoderma reesei Cel6A and Its Domains on Crystalline Cellulose. Journal of Biological Chemistry, 2016, 291, 22404-22413.	1.6	45
24	Direct Observation of Proton Pathway in Enzyme by Joint Analysis of Neutron and X-ray Crystallography. Seibutsu Butsuri, 2016, 56, 171-173.	0.0	0
25	Analysis of Reaction Mechanism of Inverting Cellulase Including a Proton Pathway by a Joint Analysis of Neutron/X-ray Crystallography. Hamon, 2016, 26, 139-142.	0.0	0
26	â€œNewtonâ€™s cradleâ€•proton relay with amideâ€“imidic acid tautomerization in inverting cellulase visualized by neutron crystallography. Science Advances, 2015, 1, e1500263.	4.7	80
27	Structural and Biochemical Analyses of Glycoside Hydrolase Family 26 Î²-Mannanase from a Symbiotic Protist of the Termite Reticulitermes speratus. Journal of Biological Chemistry, 2014, 289, 10843-10852.	1.6	22
28	Single-molecule Imaging Analysis of Elementary Reaction Steps of Trichoderma reesei Cellobiohydrolase I (Cel7A) Hydrolyzing Crystalline Cellulose Iα and Iβ. Journal of Biological Chemistry, 2014, 289, 14056-14065.	1.6	50
29	The GH26 Î²-mannanase RsMan26H from a symbiotic protist of the termite Reticulitermes speratus is an endo-processive mannobiohydrolase: Heterologous expression and characterization. Biochemical and Biophysical Research Communications, 2014, 452, 520-525.	1.0	16
30	Trade-off between Processivity and Hydrolytic Velocity of Cellobiohydrolases at the Surface of Crystalline Cellulose. Journal of the American Chemical Society, 2014, 136, 4584-4592.	6.6	77
31	Molecular Mechanism of an Exo-type Cellulase Revealed by Single-molecule Analysis. Seibutsu Butsuri, 2014, 54, 318-320.	0.0	0
32	The Tryptophan Residue at the Active Site Tunnel Entrance of Trichoderma reesei Cellobiohydrolase Cel7A Is Important for Initiation of Degradation of Crystalline Cellulose. Journal of Biological Chemistry, 2013, 288, 13503-13510.	1.6	77
33	Phase-diagram-guided method for growth of a large crystal of glycoside hydrolase family 45 inverting cellulase suitable for neutron structural analysis. Journal of Synchrotron Radiation, 2013, 20, 859-863.	1.0	14
34	Degradation of Crystalline Celluloses by Phanerochaete chrysosporium Cellobiohydrolase II (Cel6A) Heterologously Expressed in Methylotrophic Yeast Pichia pastoris. Journal of Applied Glycoscience (1999), 2012, 59, 105-110.	0.3	16