

# Masafumi Odaka

## List of Publications by Year in descending order

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Version: 2024-02-01

45  
papers

2,126  
citations

279798

23  
h-index

243625

44  
g-index

47  
all docs

47  
docs citations

47  
times ranked

1395  
citing authors

#	ARTICLE	IF	CITATIONS
1	Novel non-heme iron center of nitrile hydratase with a claw setting of oxygen atoms. <i>Nature Structural Biology</i> , 1998, 5, 347-351.	9.7	342
2	Post-translational modification is essential for catalytic activity of nitrile hydratase. <i>Protein Science</i> , 2000, 9, 1024-1030.	7.6	156
3	Fe-type nitrile hydratase. <i>Journal of Inorganic Biochemistry</i> , 2001, 83, 247-253.	3.5	126
4	Activity Regulation of Photoreactive Nitrile Hydratase by Nitric Oxide. <i>Journal of the American Chemical Society</i> , 1997, 119, 3785-3791.	13.7	116
5	Sulfur K-Edge XAS and DFT Calculations on Nitrile Hydratase: Geometric and Electronic Structure of the Non-heme Iron Active Site. <i>Journal of the American Chemical Society</i> , 2006, 128, 533-541.	13.7	91
6	Structure of the Photoreactive Iron Center of the Nitrile Hydratase from <i>Rhodococcus</i> sp. N-771. <i>Journal of Biological Chemistry</i> , 1997, 272, 29454-29459.	3.4	85
7	An enzyme controlled by light: the molecular mechanism of photoreactivity in nitrile hydratase. <i>Trends in Biotechnology</i> , 1999, 17, 244-248.	9.3	83
8	Carbonyl Sulfide Hydrolase from <i>Thiobacillus thioparus</i> Strain TH115 Is One of the $\beta$ -Carbonic Anhydrase Family Enzymes. <i>Journal of the American Chemical Society</i> , 2013, 135, 3818-3825.	13.7	82
9	Tertiary and Quaternary Structures of Photoreactive Fe-Type Nitrile Hydratase from <i>Rhodococcus</i> sp. N-771: Roles of Hydration Water Molecules in Stabilizing the Structures and the Structural Origin of the Substrate Specificity of the Enzyme. <i>Biochemistry</i> , 1999, 38, 9887-9898.	2.5	75
10	Structure of Thiocyanate Hydrolase: A New Nitrile Hydratase Family Protein with a Novel Five-coordinate Cobalt(III) Center. <i>Journal of Molecular Biology</i> , 2007, 366, 1497-1509.	4.2	75
11	Packaging guest proteins into the encapsulin nanocompartment from <i>Rhodococcus erythropolis</i> N771. <i>Biotechnology and Bioengineering</i> , 2015, 112, 13-20.	3.3	73
12	Resonance Raman Evidence that Photodissociation of Nitric Oxide from the Non-Heme Iron Center Activates Nitrile Hydratase from <i>Rhodococcus</i> sp. N-771. <i>Biochemistry</i> , 1996, 35, 16777-16781.	2.5	66
13	Protonation Structures of Cys-Sulfinic and Cys-Sulfenic Acids in the Photosensitive Nitrile Hydratase Revealed by Fourier Transform Infrared Spectroscopy. <i>Biochemistry</i> , 2003, 42, 11642-11650.	2.5	65
14	Catalytic Mechanism of Nitrile Hydratase Proposed by Time-resolved X-ray Crystallography Using a Novel Substrate, <i>tert</i> -Butylisocyanide. <i>Journal of Biological Chemistry</i> , 2008, 283, 36617-36623.	3.4	57
15	Ligand-Binding Enhances the Affinity of Dimerization of the Extracellular Domain of the Epidermal Growth Factor Receptor. <i>Journal of Biochemistry</i> , 1997, 122, 116-121.	1.7	55
16	Cobalt-substituted Fe-type nitrile hydratase of <i>Rhodococcus</i> sp. N-771. <i>FEBS Letters</i> , 2000, 465, 173-177.	2.8	51
17	A Novel Inhibitor for Fe-type Nitrile Hydratase: 2-Cyano-2-propyl Hydroperoxide. <i>Journal of the American Chemical Society</i> , 2003, 125, 11532-11538.	13.7	50
18	Thiocyanate Hydrolase Is a Cobalt-Containing Metalloenzyme with a Cysteine-Sulfinic Acid Ligand. <i>Journal of the American Chemical Society</i> , 2006, 128, 728-729.	13.7	48

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19	Motif CXCC in nitrile hydratase activator is critical for NHase biogenesis in vivo. FEBS Letters, 2003, 553, 391-396.	2.8	46
20	Structural Basis for Catalytic Activation of Thiocyanate Hydrolase Involving Metal-Ligated Cysteine Modification. Journal of the American Chemical Society, 2009, 131, 14838-14843.	13.7	42
21	Location of the Non-Heme Iron Center on the $\hat{\alpha}$ Subunit of Photoreactive Nitrile Hydratase from <i>Rhodococcus</i> sp. N-771. Biochemical and Biophysical Research Communications, 1996, 221, 146-150.	2.1	31
22	Mutational Study on $\hat{\alpha}$ Gln90 of Fe-Type Nitrile Hydratase from <i>Rhodococcus</i> sp. N771. Bioscience, Biotechnology and Biochemistry, 2006, 70, 881-889.	1.3	30
23	Kinetic and structural studies on roles of the serine ligand and a strictly conserved tyrosine residue in nitrile hydratase. Journal of Biological Inorganic Chemistry, 2010, 15, 655-665.	2.6	26
24	HSP60 possesses a GTPase activity and mediates protein folding with HSP10. Scientific Reports, 2017, 7, 16931.	3.3	25
25	K <sup>+</sup> is an indispensable cofactor for GrpE stimulation of ATPase activity of DnaK-DnaJ complex from <i>Thermus thermophilus</i> . FEBS Letters, 1997, 412, 633-636.	2.8	22
26	Time-Resolved Crystallography of the Reaction Intermediate of Nitrile Hydratase: Revealing a Role for the Cysteinesulfenic Acid Ligand as a Catalytic Nucleophile. Angewandte Chemie - International Edition, 2015, 54, 10763-10767.	13.8	20
27	Tyr-341 of the $\hat{\beta}$ Subunit Is a Major Km-Determining Residue of TF1-ATPase: Parallel Effect of Its Mutations on K <sub>d</sub> (ATP) of the $\hat{\beta}$ Subunit and on K <sub>m</sub> (ATP) of the $\hat{\alpha}$ $\hat{\beta}$ $\hat{\gamma}$ Complex. Journal of Biochemistry, 1994, 115, 789-796.	1.7	19
28	Spectroscopic and computational studies of nitrile hydratase: insights into geometric and electronic structure and the mechanism of amide synthesis. Chemical Science, 2015, 6, 6280-6294.	7.4	19
29	Successful PEGylation of hollow encapsulin nanoparticles from <i>Rhodococcus erythropolis</i> N771 without affecting their disassembly and reassembly properties. Biomaterials Science, 2017, 5, 1082-1089.	5.4	16
30	What evidences were elucidated about photoreactive nitrile hydratase?. Journal of Molecular Catalysis B: Enzymatic, 2000, 10, 81-86.	1.8	15
31	Functional expression of thiocyanate hydrolase is promoted by its activator protein, P15K. FEBS Letters, 2006, 580, 4667-4672.	2.8	14
32	Catalytic Mechanism of Nitrile Hydratase Subsequent to Cyclic Intermediate Formation: A QM/MM Study. Journal of Physical Chemistry B, 2016, 120, 3259-3266.	2.6	14
33	Aromatic rings of tyrosine residues at adenine nucleotide binding sites of the $\hat{\beta}$ subunits of F1-ATPase are not necessary for ATPase activity. Biochemical and Biophysical Research Communications, 1990, 168, 372-378.	2.1	13
34	Crystal structures of halohydrin hydrogen-halide-lyases from <i>Corynebacterium</i> sp. N-1074. Proteins: Structure, Function and Bioinformatics, 2015, 83, 2230-2239.	2.6	11
35	Improvement of enantioselectivity of the B-type halohydrin hydrogen-halide-lyase from <i>Corynebacterium</i> sp. N-1074. Journal of Bioscience and Bioengineering, 2016, 122, 270-275.	2.2	10
36	Novel catalytic activity of nitrile hydratase from <i>Rhodococcus</i> sp. N771. Journal of Bioscience and Bioengineering, 2008, 106, 174-179.	2.2	9

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37	Structural and functional characterization of aspartate racemase from the acidothermophilic archaeon <i>Picrophilus torridus</i> . <i>Extremophiles</i> , 2016, 20, 385-393.	2.3	8
38	In vivo affinity label of a protein expressed in <i>Escherichia coli</i> . <i>FEBS Letters</i> , 1993, 336, 231-235.	2.8	7
39	Multiple Myeloma-associated Ig Light Chain Crystalline Cast Nephropathy. <i>Kidney International Reports</i> , 2020, 5, 1595-1602.	0.8	7
40	Two arginine residues in the substrate pocket predominantly control the substrate selectivity of thiocyanate hydrolase. <i>Journal of Bioscience and Bioengineering</i> , 2013, 116, 22-27.	2.2	6
41	NADH oxidase and alkyl hydroperoxide reductase subunit C (peroxiredoxin) from <i>Amphibacillus xylanus</i> form an oligomeric assembly. <i>FEBS Open Bio</i> , 2015, 5, 124-131.	2.3	6
42	Comparative proteomic analysis of renal proteins from IgA nephropathy model mice and control mice. <i>Clinical and Experimental Nephrology</i> , 2020, 24, 666-679.	1.6	6
43	A single mutation at the catalytic site of TF1- $\beta$ complex switches the kinetics of ATP hydrolysis from negative to positive cooperativity. <i>FEBS Letters</i> , 1997, 413, 55-59.	2.8	5
44	The Transitional Transmittance Response of ZIF-8 Gas Adsorption Observed Using Terahertz Waves. <i>E-Journal of Surface Science and Nanotechnology</i> , 2018, 16, 142-144.	0.4	3
45	Studies on photoreactive enzyme --nitrile hydratase-. <i>Progress in Biotechnology</i> , 2002, 22, 159-168.	0.2	0