

# Toshimichi Fujiwara

## List of Publications by Year in descending order

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102  
papers

3,081  
citations

218677

26  
h-index

189892

50  
g-index

107  
all docs

107  
docs citations

107  
times ranked

3989  
citing authors

#	ARTICLE	IF	CITATIONS
1	Protein Data Bank: the single global archive for 3D macromolecular structure data. <i>Nucleic Acids Research</i> , 2019, 47, D520-D528.	14.5	671
2	3D structure of amyloid protofilaments of beta2-microglobulin fragment probed by solid-state NMR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 18119-18124.	7.1	224
3	Structure of the light-harvesting bacteriochlorophyll assembly in chlorosomes from <i>Chlorobium limicola</i> determined by solid-state NMR. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 790-795.	7.1	103
4	Photoinduced Changes of Adsorbed Water on a TiO <sub>2</sub> Photocatalytic Film As Studied by <sup>1</sup> H NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2003, 107, 12042-12044.	2.6	101
5	Characteristics of Water Adsorbed on TiO <sub>2</sub> Photocatalytic Systems with Increasing Temperature as Studied by Solid-State <sup>1</sup> H NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2004, 108, 9121-9125.	2.6	94
6	Current NMR Techniques for Structure-Based Drug Discovery. <i>Molecules</i> , 2018, 23, 148.	3.8	92
7	New tools and functions in data-out activities at Protein Data Bank Japan (PDBj). <i>Protein Science</i> , 2018, 27, 95-102.	7.6	90
8	Structure of Tightly Membrane-Bound Mastoparan-X, a G-Protein-Activating Peptide, Determined by Solid-State NMR. <i>Biophysical Journal</i> , 2006, 91, 1368-1379.	0.5	74
9	Continuously Frequency Tunable High Power Sub-THz Radiation Source—Gyrotron FU CW VI for 600 MHz DNP-NMR Spectroscopy. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2010, 31, 775-790.	2.2	72
10	Helium-cooling and -spinning dynamic nuclear polarization for sensitivity-enhanced solid-state NMR at 14T and 30K. <i>Journal of Magnetic Resonance</i> , 2012, 225, 1-9.	2.1	72
11	Dynamic nuclear polarization experiments at 14.1 T for solid-state NMR. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 5799.	2.8	68
12	Advanced instrumentation for DNP-enhanced MAS NMR for higher magnetic fields and lower temperatures. <i>Journal of Magnetic Resonance</i> , 2016, 264, 107-115.	2.1	64
13	Modern Technologies of Solution Nuclear Magnetic Resonance Spectroscopy for Three-dimensional Structure Determination of Proteins Open Avenues for Life Scientists. <i>Computational and Structural Biotechnology Journal</i> , 2017, 15, 328-339.	4.1	57
14	<sup>13</sup> C- <sup>13</sup> C and <sup>13</sup> C- <sup>15</sup> N Dipolar Correlation NMR of Uniformly Labeled Organic Solids for the Complete Assignment of Their <sup>13</sup> C and <sup>15</sup> N Signals: An Application to Adenosine. <i>Journal of the American Chemical Society</i> , 1995, 117, 11351-11352.	13.7	47
15	How Far Can the Sensitivity of NMR Be Increased?. <i>Annual Reports on NMR Spectroscopy</i> , 2006, 58, 155-175.	1.5	44
16	Photocatalytic Reaction Sites at the TiO <sub>2</sub> Surface as Studied by Solid-State <sup>1</sup> H NMR Spectroscopy. <i>Langmuir</i> , 2003, 19, 1935-1937.	3.5	39
17	Signal assignments and chemical-shift structural analysis of uniformly <sup>13</sup> C, <sup>15</sup> N-labeled peptide, mastoparan-X, by multidimensional solid-state NMR under magic-angle spinning. <i>Journal of Biomolecular NMR</i> , 2004, 28, 311-325.	2.8	38
18	Application of Continuously Frequency-Tunable 0.4 THz Gyrotron to Dynamic Nuclear Polarization for 600 MHz Solid-State NMR. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2012, 33, 745-755.	2.2	38

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19	Closed-cycle cold helium magic-angle spinning for sensitivity-enhanced multi-dimensional solid-state NMR. <i>Journal of Magnetic Resonance</i> , 2015, 259, 76-81.	2.1	38
20	Redox-coupled Conformational Alternations in Cytochrome c3 from <i>D.vulgaris</i> Miyazaki F on the Basis of its Reduced Solution Structure. <i>Journal of Molecular Biology</i> , 2002, 319, 767-778.	4.2	36
21	Multidimensional Solid-State Nuclear Magnetic Resonance for Correlating Anisotropic Interactions under Magic-Angle Spinning Conditions. <i>Journal of Magnetic Resonance</i> , 1997, 124, 147-153.	2.1	34
22	Molecular mobility of protein in lyophilized formulations linked to the molecular mobility of polymer excipients, as determined by high resolution <sup>13</sup> C solid-state NMR. <i>Pharmaceutical Research</i> , 1999, 16, 1621-1625.	3.5	34
23	Diverse Structural Conversion and Aggregation Pathways of Alzheimer's Amyloid- $\beta$ (1-40). <i>ACS Nano</i> , 2019, 13, 8766-8783.	14.6	33
24	Boosting Protein Dynamics Studies Using Quantitative Nonuniform Sampling NMR Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2011, 115, 13740-13745.	2.6	30
25	The wobbling cone analysis of internal motion in macromolecules. <i>Journal of Chemical Physics</i> , 1985, 83, 3110-3117.	3.0	29
26	Phase-modulated heteronuclear decoupling in NMR of solids. <i>Journal of Magnetic Resonance</i> , 2003, 162, 46-53.	2.1	27
27	Signal assignment and secondary structure analysis of a uniformly [ <sup>13</sup> C, <sup>15</sup> N]-labeled membrane protein, H <sup>+</sup> -ATP synthase subunit c, by magic-angle spinning solid-state NMR. <i>Journal of Biomolecular NMR</i> , 2006, 36, 279-293.	2.8	26
28	An automated system designed for large scale NMR data deposition and annotation: application to over 600 assigned chemical shift data entries to the BioMagResBank from the Riken Structural Genomics/Proteomics Initiative internal database. <i>Journal of Biomolecular NMR</i> , 2012, 53, 311-320.	2.8	26
29	Structure determination of uniformly <sup>13</sup> C, <sup>15</sup> N labeled protein using qualitative distance restraints from MAS solid-state <sup>13</sup> C-NMR observed paramagnetic relaxation enhancement. <i>Journal of Biomolecular NMR</i> , 2016, 64, 87-101.	2.8	25
30	Development of second harmonic gyrotrons, Gyrotron FU CW GII and Gyrotron FU CW GIII, equipped with internal mode converters. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2014, 35, 169-178.	2.2	24
31	Latest approaches for efficient protein production in drug discovery. <i>Expert Opinion on Drug Discovery</i> , 2014, 9, 1189-1204.	5.0	24
32	Robust folding of a de novo designed ideal protein even with most of the core mutated to valine. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 31149-31156.	7.1	23
33	Noise peak filtering in multi-dimensional NMR spectra using convolutional neural networks. <i>Bioinformatics</i> , 2018, 34, 4300-4301.	4.1	22
34	Photoinduced Changes of Surface and Adsorbed Water in TiO <sub>2</sub> Photocatalytic Systems as Studied by Solid State <sup>1</sup> H-NMR Spectroscopy. <i>Chemistry Letters</i> , 2002, 31, 420-421.	1.3	21
35	Phosphoinositide binding by the PH domain in ceramide transfer protein (CERT) is inhibited by hyperphosphorylation of an adjacent serine-repeat motif. <i>Journal of Biological Chemistry</i> , 2018, 293, 11206-11217.	3.4	21
36	Cooperative regulation of PBI1 and MAPKs controls WRKY45 transcription factor in rice immunity. <i>Nature Communications</i> , 2022, 13, 2397.	12.8	20

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37	Development of a Compact sub-THz Gyrotron FU CW CI for Application to High Power THz Technologies. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2012, 33, 724-744.	2.2	19
38	Characteristics of the mode converter of Gyrotron FU CW GII radiating Gaussian beams in both the fundamental and second harmonic frequency bands. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2014, 35, 517-524.	2.2	19
39	Oxytocin solution structure changes upon protonation of the N-terminus in dimethyl sulfoxide. <i>Journal of Biomolecular NMR</i> , 1993, 3, 653-73.	2.8	18
40	Band-selective recoupling of homonuclear double-quantum dipolar interaction with a generalized composite $O\hat{A}^\circ$ pulse: application to aliphatic region-selective magnetization transfer in solids. <i>Journal of Magnetic Resonance</i> , 2003, 162, 54-66.	2.1	18
41	Detection of Peptide-Phospholipid Interaction Sites in Bilayer Membranes by $^{13}C$ NMR Spectroscopy: $\hat{A}$ Observation of $^2H/^{31}P$ -Selective $^1H$ -Depolarization under Magic-Angle Spinning. <i>Journal of the American Chemical Society</i> , 2006, 128, 10654-10655.	13.7	18
42	Broadband Continuously Frequency Tunable Gyrotron for 600 MHz DNP-NMR Spectroscopy. <i>Plasma and Fusion Research</i> , 2014, 9, 1206058-1206058.	0.7	18
43	Utilization of lysine $^{13}C$ -methylation NMR for protein-protein interaction studies. <i>Journal of Biomolecular NMR</i> , 2013, 55, 19-31.	2.8	17
44	Fluid Mechanical Matching of $H^+$ -ATP Synthase Subunit c-Ring with Lipid Membranes Revealed by $^2H$ Solid-State NMR. <i>Biophysical Journal</i> , 2008, 94, 4339-4347.	0.5	16
45	Utilization of paramagnetic relaxation enhancements for high-resolution NMR structure determination of a soluble loop-rich protein with sparse NOE distance restraints. <i>Journal of Biomolecular NMR</i> , 2015, 61, 55-64.	2.8	16
46	Temperature- and composition-dependent conformational transitions of amphipathic peptide-phospholipid nanodiscs. <i>Journal of Colloid and Interface Science</i> , 2021, 588, 522-530.	9.4	16
47	Conformational study of $^{13}C$ -enriched fibroin in the solid state, using the cross polarization nuclear magnetic resonance method. <i>Journal of Molecular Biology</i> , 1986, 187, 137-140.	4.2	14
48	Precision $^1H$ - $^1H$ distance measurement via $^{13}C$ NMR signals: utilization of $^1H$ - $^1H$ double-quantum dipolar interactions recoupled under magic angle spinning conditions. <i>Magnetic Resonance in Chemistry</i> , 2004, 42, 291-300.	1.9	14
49	Membrane Mediated Antimicrobial and Antitumor Activity of Cathelicidin 6: Structural Insights from Molecular Dynamics Simulation on Multi-Microsecond Scale. <i>PLoS ONE</i> , 2016, 11, e0158702.	2.5	14
50	Solution NMR structure and inhibitory effect against amyloid- $\beta^2$ fibrillation of Humanin containing a d-isomerized serine residue. <i>Biochemical and Biophysical Research Communications</i> , 2016, 477, 647-653.	2.1	14
51	Protein $^{19}F$ -labeling using transglutaminase for the NMR study of intermolecular interactions. <i>Journal of Biomolecular NMR</i> , 2017, 68, 271-279.	2.8	14
52	The Route from the Folded to the Amyloid State: Exploring the Potential Energy Surface of a Drug-Like Miniprotein. <i>Chemistry - A European Journal</i> , 2020, 26, 1968-1978.	3.3	14
53	Polyphenol-solubility alters amyloid fibril formation of $\beta$ -synuclein. <i>Protein Science</i> , 2021, 30, 1701-1713.	7.6	14
54	Compound Radiofrequency-Driven Recoupling Pulse Sequences for Efficient Magnetization Transfer by Homonuclear Dipolar Interaction under Magic-Angle Spinning Conditions. <i>Journal of Magnetic Resonance</i> , 2000, 145, 73-83.	2.1	13

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55	Multidimensional solid-state nuclear magnetic resonance for determining the dihedral angle from the correlation of $^{13}\text{C}$ - $^1\text{H}$ and $^{13}\text{C}$ - $^{13}\text{C}$ dipolar interactions under magic-angle spinning conditions. <i>Journal of Chemical Physics</i> , 1998, 109, 2380-2393.	3.0	12
56	A novel chitin-binding mode of the chitin-binding domain of chitinase A1 from <i>Bacillus circulans</i> WL-12 revealed by solid-state NMR. <i>FEBS Letters</i> , 2018, 592, 3173-3182.	2.8	11
57	Gadolinium Complexes as Contrast Agent for Cellular NMR Spectroscopy. <i>International Journal of Molecular Sciences</i> , 2020, 21, 4042.	4.1	11
58	The interactions of ferric and ferrous cytochrome c with cardiolipin in phospholipid membranes studied by solid-state $^2\text{H}$ and $^{31}\text{P}$ NMR. <i>Journal of Molecular Structure</i> , 1998, 441, 183-188.	3.6	10
59	Atomic structure of the bacteriochlorophyll c assembly in intact chlorosomes from <i>Chlorobium limicola</i> determined by solid-state NMR. <i>Photosynthesis Research</i> , 2010, 104, 221-231.	2.9	10
60	Purification, characterization and reconstitution into membranes of the oligomeric c-subunit ring of thermophilic FoF <sub>1</sub> -ATP synthase expressed in <i>Escherichia coli</i> . <i>Protein Expression and Purification</i> , 2012, 82, 396-401.	1.3	10
61	Active-Site Structure of the Thermophilic Foc-Subunit Ring in Membranes Elucidated by Solid-State NMR. <i>Biophysical Journal</i> , 2014, 106, 390-398.	0.5	10
62	Mechanistic and structural basis of bioengineered bovine Cathelicidin-5 with optimized therapeutic activity. <i>Scientific Reports</i> , 2017, 7, 44781.	3.3	10
63	Evolution of $\beta$ -synuclein conformation ensemble toward amyloid fibril via liquid-liquid phase separation (LLPS) as investigated by dynamic nuclear polarization-enhanced solid-state MAS NMR. <i>Neurochemistry International</i> , 2022, 157, 105345.	3.8	10
64	Modulation of the specific interaction of cardiolipin with cytochrome c by zwitterionic phospholipids in binary mixed bilayers; a $^2\text{H}$ and $^{31}\text{P}$ NMR study. <i>Journal of Molecular Structure</i> , 1995, 355, 47-53.	3.6	9
65	Structural analysis of pituitary adenylate cyclase-activating polypeptides bound to phospholipid membranes by magic angle spinning solid-state NMR. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2007, 1768, 3001-3011.	2.6	9
66	Further Characterization of 394-GHz Gyrotron FU CW GII with Additional PID Control System for 600-MHz DNP-SSNMR Spectroscopy. <i>Journal of Infrared, Millimeter, and Terahertz Waves</i> , 2016, 37, 825-836.	2.2	9
67	Publication of nuclear magnetic resonance experimental data with semantic web technology and the application thereof to biomedical research of proteins. <i>Journal of Biomedical Semantics</i> , 2016, 7, 16.	1.6	9
68	Absolute $^1\text{H}$ polarization measurement with a spin-correlated component of magnetization by hyperpolarized MAS-DNP solid-state NMR. <i>Solid State Nuclear Magnetic Resonance</i> , 2019, 99, 20-26.	2.3	9
69	In-cell NMR as a sensitive tool to monitor physiological condition of <i>Escherichia coli</i> . <i>Scientific Reports</i> , 2020, 10, 2466.	3.3	9
70	Efficiency analysis of helium-cooled MAS DNP: case studies of surface-modified nanoparticles and homogeneous small-molecule solutions. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 4919-4926.	2.8	9
71	Structure analysis of membrane-reconstituted subunit c-ring of <i>E. coli</i> H <sup>+</sup> -ATP synthase by solid-state NMR. <i>Journal of Biomolecular NMR</i> , 2010, 48, 1-11.	2.8	8
72	$^1\text{H}$ -detected $^1\text{H}$ - $^1\text{H}$ correlation spectroscopy of a stereo-array isotope labeled amino acid under fast magic-angle spinning. <i>Journal of Magnetic Resonance</i> , 2010, 203, 253-256.	2.1	8

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73	Combined Use of Replica-Exchange Molecular Dynamics and Magic-Angle-Spinning Solid-State NMR Spectral Simulations for Determining the Structure and Orientation of Membrane-Bound Peptide. <i>Journal of Physical Chemistry B</i> , 2011, 115, 9327-9336.	2.6	8
74	Secondary structural analysis of proteins based on <sup>13</sup> C chemical shift assignments in unresolved solid-state NMR spectra enhanced by fragmented structure database. <i>Journal of Biomolecular NMR</i> , 2013, 55, 189-200.	2.8	8
75	Spectral fitting for signal assignment and structural analysis of uniformly <sup>13</sup> C-labeled solid proteins by simulated annealing based on chemical shifts and spin dynamics. <i>Journal of Biomolecular NMR</i> , 2007, 38, 325-339.	2.8	7
76	A magic-angle-spinning NMR method for <sup>1</sup> H- <sup>1</sup> H distance measurement using coherent polarization transfer in <sup>13</sup> C-labeled organic solids. <i>Journal of Chemical Physics</i> , 2008, 129, 154504.	3.0	7
77	Direct assignment of <sup>13</sup> C solid-state NMR signals of TfoF1 ATP synthase subunit c-ring in lipid membranes and its implication for the ring structure. <i>Journal of Biomolecular NMR</i> , 2018, 70, 53-65.	2.8	7
78	Structural analysis of cross-linked poly(vinyl alcohol) using high-field DNP-NMR. <i>RSC Advances</i> , 2020, 10, 8039-8043.	3.6	7
79	Cryogenic signal amplification combined with helium-temperature MAS DNP toward ultimate NMR sensitivity at high field conditions. <i>Journal of Magnetic Resonance</i> , 2022, 335, 107139.	2.1	7
80	In support of the BMRB. <i>Nature Structural and Molecular Biology</i> , 2012, 19, 854-860.	8.2	6
81	<sup>1</sup> H, <sup>15</sup> N and <sup>13</sup> C resonance assignments of the conserved region in the middle domain of <i>S. pombe</i> Sin1 protein. <i>Biomolecular NMR Assignments</i> , 2015, 9, 89-92.	0.8	6
82	Plant-specific DUF1110 protein from <i>Oryza sativa</i> : expression, purification and crystallization. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2016, 72, 480-484.	0.8	6
83	Transient antibody-antigen interactions mediate the strain-specific recognition of a conserved malaria epitope. <i>Communications Biology</i> , 2018, 1, 58.	4.4	6
84	Peptide Cyclization Mediated by Metal-Free Arylation: Protected Cysteine Sulfoxide as an Umpolung of the Cysteine Nucleophile. <i>Chemistry - A European Journal</i> , 2021, 27, 14092-14099.	3.3	6
85	Nanodisc-to-Nanofiber Transition of Noncovalent Peptide-Phospholipid Assemblies. <i>ACS Omega</i> , 2017, 2, 2935-2944.	3.5	5
86	Conformational states of HAMP domains interacting with sensory rhodopsin membrane systems: an integrated all-atom and coarse-grained molecular dynamics simulation approach. <i>Molecular BioSystems</i> , 2017, 13, 193-207.	2.9	5
87	Surface-Only Spectroscopy for Diffusion-Limited Systems Using Ultra-Low-Temperature DNP MAS NMR at 16.4 T. <i>Journal of Physical Chemistry C</i> , 2020, 124, 18609-18614.	3.1	5
88	A hybrid strategy combining solution NMR spectroscopy and isothermal titration calorimetry to characterize protein-nanodisc interaction. <i>Analytical Biochemistry</i> , 2022, 639, 114521.	2.4	5
89	Behavior of water molecules associated with the phase transitions in the binary system of dioctadecyldimethylammonium chloride and water studied by proton and deuterium magnetic resonances. <i>Journal of Colloid and Interface Science</i> , 1989, 127, 26-34.	9.4	4
90	Designing Analogues of Mini Atrial Natriuretic Peptide Based on Structural Analysis by NMR and Restrained Molecular Dynamics. <i>Journal of Medicinal Chemistry</i> , 2002, 45, 881-887.	6.4	4

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91	Phospholipid-Dependent Regulation of Cytochrome c3-Mediated Electron Transport across Membranes. <i>Biophysical Journal</i> , 2006, 90, 506-513.	0.5	4
92	Sensitivity enhancement by sequential data acquisition for <sup>13</sup> C-direct detection NMR. <i>Journal of Magnetic Resonance</i> , 2021, 322, 106878.	2.1	4
93	Biochemical propensity mapping for structural and functional anatomy of importin Î± IBB domain. <i>Genes To Cells</i> , 2022, 27, 173-191.	1.2	4
94	Cold-Shock Expression System in <i>E. coli</i> for Protein NMR Studies. <i>Methods in Molecular Biology</i> , 2017, 1586, 345-357.	0.9	3
95	Advances in High-Field DNP Methods. , 2018, , 91-134.		3
96	Sequence requirements of the FFAT-like motif for specific binding to VAP are revealed by NMR. <i>FEBS Letters</i> , 2021, 595, 2248-2256.	2.8	3
97	Veratridine binding to a transmembrane helix of sodium channel Nav1.4 determined by solid-state NMR. <i>Bioorganic and Medicinal Chemistry</i> , 2018, 26, 5644-5653.	3.0	2
98	Structural dynamics of the chromo-shadow domain and chromodomain of HP1 bound to histone H3K9 methylated peptide, as measured by site-directed spin-labeling EPR spectroscopy. <i>Biochemical and Biophysical Research Communications</i> , 2021, 567, 42-48.	2.1	2
99	Osmotic Stability of Muramyl Dipeptide-Bearing Liposomes and Molecular Miscibility in Their Membranes. <i>Bulletin of the Chemical Society of Japan</i> , 1999, 72, 541-548.	3.2	1
100	Corrugated transmission line systems for 395 GHz/600 MHz and 460 GHz/700 MHz DNP-NMR spectroscopy. , 2014, , .		1
101	Microdomain formation in phosphatidylethanolamine bilayers detected by <sup>2</sup> H-NMR. <i>Chemistry and Physics of Lipids</i> , 1995, 76, 55-62.	3.2	0
102	3P-086 Solid-state NMR measurement of H <sup>+</sup> -ATP synthase subunit c-ring reconstituted into lipid bilayers(The 46th Annual Meeting of the Biophysical Society of Japan). <i>Seibutsu Butsuri</i> , 2008, 48, S140.	0.1	0