

# Shigenobu Hayashi

## List of Publications by Year in descending order

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161  
papers

8,956  
citations

61984

43  
h-index

43889

91  
g-index

166  
all docs

166  
docs citations

166  
times ranked

7375  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrolysis of Cellulose by Amorphous Carbon Bearing SO <sub>3</sub> H, COOH, and OH Groups. <i>Journal of the American Chemical Society</i> , 2008, 130, 12787-12793.	13.7	941
2	Biodiesel made with sugar catalyst. <i>Nature</i> , 2005, 438, 178-178.	27.8	735
3	A Carbon Material as a Strong Protonic Acid. <i>Angewandte Chemie - International Edition</i> , 2004, 43, 2955-2958.	13.8	519
4	Acid-Catalyzed Reactions on Flexible Polycyclic Aromatic Carbon in Amorphous Carbon. <i>Chemistry of Materials</i> , 2006, 18, 3039-3045.	6.7	509
5	Nb <sub>2</sub> O <sub>5</sub> ·nH <sub>2</sub> O as a Heterogeneous Catalyst with Water-Tolerant Lewis Acid Sites. <i>Journal of the American Chemical Society</i> , 2011, 133, 4224-4227.	13.7	480
6	Adsorption-Enhanced Hydrolysis of Î <sup>2</sup> -1,4-Glucan on Graphene-Based Amorphous Carbon Bearing SO <sub>3</sub> H, COOH, and OH Groups. <i>Langmuir</i> , 2009, 25, 5068-5075.	3.5	274
7	Esterification of higher fatty acids by a novel strong solid acid. <i>Catalysis Today</i> , 2006, 116, 157-161.	4.4	266
8	Exfoliated Nanosheets as a New Strong Solid Acid Catalyst. <i>Journal of the American Chemical Society</i> , 2003, 125, 5479-5485.	13.7	247
9	Chemical Shift Standards in High-Resolution Solid-State NMR ( <sup>1</sup> 3C, <sup>29</sup> Si, and <sup>1</sup> H Nuclei. <i>Bulletin of the Chemical Society of Japan</i> , 1991, 64, 685-687.	3.2	214
10	Nanosheets as highly active solid acid catalysts for green chemical syntheses. <i>Energy and Environmental Science</i> , 2010, 3, 82-93.	30.8	167
11	Protonated Titanate Nanotubes as Solid Acid Catalyst. <i>Journal of the American Chemical Society</i> , 2010, 132, 6622-6623.	13.7	159
12	Protonated Titanate Nanotubes with Lewis and Brønsted Acidity: Relationship between Nanotube Structure and Catalytic Activity. <i>Chemistry of Materials</i> , 2013, 25, 385-393.	6.7	153
13	Amorphous Carbon Bearing Sulfonic Acid Groups in Mesoporous Silica as a Selective Catalyst. <i>Chemistry of Materials</i> , 2009, 21, 186-193.	6.7	136
14	Synthesis and acid catalysis of cellulose-derived carbon-based solid acid. <i>Solid State Sciences</i> , 2010, 12, 1029-1034.	3.2	133
15	Preparation of a Sulfonated Porous Carbon Catalyst with High Specific Surface Area. <i>Catalysis Letters</i> , 2009, 131, 242-249.	2.6	127
16	Highly Active Mesoporous Nb-W Oxide Solid Acid Catalyst. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 1128-1132.	13.8	124
17	Exfoliated HNb <sub>3</sub> O <sub>8</sub> Nanosheets as a Strong Protonic Solid Acid. <i>Chemistry of Materials</i> , 2005, 17, 2487-2489.	6.7	117
18	Structure and Catalysis of Cellulose-Derived Amorphous Carbon Bearing SO <sub>3</sub> H Groups. <i>ChemSusChem</i> , 2011, 4, 778-784.	6.8	111

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19	Modification of the Interlayer Surface of Kaolinite with Methoxy Groups. <i>Langmuir</i> , 2000, 16, 5506-5508.	3.5	104
20	Efficient Utilization of Nanospace of Layered Transition Metal Oxide $\text{HNbMoO}_6$ as a Strong, Water-Tolerant Solid Acid Catalyst. <i>Journal of the American Chemical Society</i> , 2008, 130, 7230-7231.	13.7	103
21	Titanium Niobate and Titanium Tantalate Nanosheets as Strong Solid Acid Catalysts. <i>Journal of Physical Chemistry B</i> , 2004, 108, 11549-11555.	2.6	99
22	High-resolution solid-state $^{13}\text{C}$ NMR spectra of tetramethylammonium ions trapped in zeolites. <i>Chemical Physics Letters</i> , 1985, 113, 368-371.	2.6	86
23	Intercalation of Nitroanilines into Kaolinite and Second Harmonic Generation. <i>Chemistry of Materials</i> , 2001, 13, 3741-3746.	6.7	82
24	Structure and Acid Catalysis of Mesoporous $\text{Nb}_2\text{O}_5$ . <i>Chemistry of Materials</i> , 2010, 22, 3332-3339.	6.7	82
25	Formation of 5-(Hydroxymethyl)furfural by Stepwise Dehydration over $\text{TiO}_2$ with Water-Tolerant Lewis Acid Sites. <i>Journal of Physical Chemistry C</i> , 2015, 119, 17117-17125.	3.1	82
26	Shift References in High-Resolution Solid-State NMR. <i>Bulletin of the Chemical Society of Japan</i> , 1989, 62, 2429-2430.	3.2	81
27	Accurate Determination of NMR Chemical Shifts in Alkali Halides and Their Correlation with Structural Factors. <i>Bulletin of the Chemical Society of Japan</i> , 1990, 63, 913-919.	3.2	79
28	$\text{SO}_3\text{H}$ -bearing mesoporous carbon with highly selective catalysis. <i>Microporous and Mesoporous Materials</i> , 2011, 143, 443-450.	4.4	79
29	NMR study of kaolinite. 1. Silicon-29, aluminum-27, and proton spectra. <i>The Journal of Physical Chemistry</i> , 1992, 96, 10922-10928.	2.9	73
30	Multifunctional Octamethyltetrasila[2.2]cyclophanes: Conformational Variations, Circularly Polarized Luminescence, and Organic Electroluminescence. <i>Journal of the American Chemical Society</i> , 2017, 139, 11214-11221.	13.7	73
31	Solid Lewis acidity of boehmite $\gamma\text{-AlO}(\text{OH})$ and its catalytic activity for transformation of sugars in water. <i>RSC Advances</i> , 2014, 4, 43785-43791.	3.6	69
32	Characterization of $\text{HNbWO}_6$ and $\text{HTaWO}_6$ Metal Oxide Nanosheet Aggregates As Solid Acid Catalysts. <i>Journal of Physical Chemistry C</i> , 2009, 113, 7831-7837.	3.1	67
33	Anhydrous Proton-Conducting Properties of Nafion <sup>®</sup> 1,2,4-Triazole and Nafion <sup>®</sup> Benzimidazole Membranes for Polymer Electrolyte Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2007, 154, A290.	2.9	65
34	Anchoring titanium dioxide on carbon spheres for high-performance visible light photocatalysis. <i>Applied Catalysis B: Environmental</i> , 2017, 207, 255-266.	20.2	64
35	Interlamellar Esterification of H-Magadiite with Aliphatic Alcohols. <i>Chemistry of Materials</i> , 2001, 13, 3747-3753.	6.7	60
36	$\text{sp}^3$ -linked Amorphous Carbon with Sulfonic Acid Groups as a Heterogeneous Acid Catalyst. <i>ChemSusChem</i> , 2012, 5, 1841-1846.	6.8	60

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37	Synthesis of an Alkylammonium/Magnesium Phyllosilicate Hybrid Nanocomposite Consisting of a Smectite-Like Layer and Organosiloxane Layers. <i>Chemistry of Materials</i> , 2003, 15, 1189-1197.	6.7	55
38	Utilization of hexagonal boron nitride as a solid acid–base bifunctional catalyst. <i>Journal of Catalysis</i> , 2017, 355, 176-184.	6.2	54
39	Soft-Chemical Synthesis and Electrochemical Property of H <sub>2</sub> Ti <sub>2</sub> O <sub>5</sub> as a Negative Electrode Material for Rechargeable Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2011, 158, A546.	2.9	49
40	NMR Study of Dynamics of Dimethyl Sulfoxide Molecules in Kaolinite/Dimethyl Sulfoxide Intercalation Compound. <i>The Journal of Physical Chemistry</i> , 1995, 99, 7120-7129.	2.9	47
41	Development of highly active SO <sub>3</sub> H-modified hybrid mesoporous catalyst. <i>Catalysis Today</i> , 2006, 116, 151-156.	4.4	47
42	Proton diffusion in the superprotonic phase of CsHSO <sub>4</sub> studied by <sup>1</sup> H NMR relaxation. <i>Solid State Ionics</i> , 2004, 171, 289-293.	2.7	44
43	Environmentally Benign Production of Chemicals and Energy Using a Carbon-Based Strong Solid Acid. <i>Journal of the American Ceramic Society</i> , 2007, 90, 3725-3734.	3.8	44
44	Layered and nanosheet tantalum molybdate as strong solid acid catalysts. <i>Journal of Catalysis</i> , 2010, 270, 206-212.	6.2	44
45	Preparation of a Novel Luminous Heterogeneous System: Rhodamine/Coumarin/Phyllosilicate Hybrid and Blue Shift in Fluorescence Emission. <i>Chemistry of Materials</i> , 2008, 20, 2994-3002.	6.7	43
46	Effects of ball-milling treatment on physicochemical properties and solid base activity of hexagonal boron nitrides. <i>Catalysis Science and Technology</i> , 2019, 9, 302-309.	4.1	42
47	Fluorescence Spectra for the Microcrystals and Thin Films of trans,trans,trans-1,6-Diphenyl-1,3,5-hexatrienes. <i>Journal of Physical Chemistry B</i> , 2003, 107, 3376-3383.	2.6	40
48	Fast proton conductor under anhydrous condition synthesized from 12-phosphotungstic acid and ionic liquid. <i>Electrochimica Acta</i> , 2007, 53, 963-967.	5.2	39
49	Dynamics of benzene, cyclohexane and n-hexane in KL zeolite studied by <sup>2</sup> H NMR. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 3839-3843.	2.8	36
50	Synthesis of Highly Ordered Hybrid Mesoporous Material Containing Etenylene (–CH=CH–) within the Silicate Framework. <i>Chemistry Letters</i> , 2003, 32, 950-951.	1.3	36
51	Intercalation-Controlled Cyclodehydration of Sorbitol in Water over Layered Niobium Molybdate Solid Acid. <i>ChemSusChem</i> , 2014, 7, 748-752.	6.8	35
52	Evaluation of strong acid properties of layered HNbMoO <sub>6</sub> and catalytic activity for Friedel–Crafts alkylation. <i>Catalysis Today</i> , 2009, 142, 267-271.	4.4	34
53	Reorientational Motion of BH <sub>4</sub> <sup>-</sup> Ions in Alkali Borohydrides MBH <sub>4</sub> (M = Li, Na, Tl). <i>Journal of Physical Chemistry B</i> , 2003, 107, 3376-3383.	3.1	33
54	Nuclear Magnetic Resonance Chemical Shifts of Pure Organic Solvents Determined by Magic Angle Spinning. <i>Analytical Sciences</i> , 1991, 7, 955-957.	1.6	32

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55	Proton dynamics in phase II of CsHSO <sub>4</sub> as probed by <sup>1</sup> H spin-lattice relaxation. <i>Solid State Communications</i> , 2004, 132, 443-448.	1.9	32
56	Acid properties of H-type mordenite studied by solid-state NMR. <i>Microporous and Mesoporous Materials</i> , 2011, 141, 49-55.	4.4	30
57	Luminescent Behavior Elucidation of a Disilane-Bridged D Triad Composed of Phenothiazine and Thienopyrazine. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 22871-22878.	13.8	30
58	Effects of Transition-Metal Composition of Protonated, Layered Nonstoichiometric Oxides H <sub>1-x</sub> Nb <sub>1-x</sub> Mo <sub>1+x</sub> O <sub>6</sub> on Heterogeneous Acid Catalysis. <i>Journal of Physical Chemistry C</i> , 2009, 113, 17421-17427.	3.1	28
59	Triblock copolymer-assisted synthesis of a hybrid mesoporous ethenylene-silica with 2D hexagonal structure and large pores. <i>Journal of Materials Chemistry</i> , 2005, 15, 2362.	6.7	25
60	Synthesis and acid catalysis of zeolite-templated microporous carbons with SO <sub>3</sub> H groups. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 9343.	2.8	25
61	A novel soft-chemical synthetic route using Na <sub>2</sub> Ti <sub>6</sub> O <sub>13</sub> as a starting compound and electrochemical properties of H <sub>2</sub> Ti <sub>12</sub> O <sub>25</sub> . <i>Journal of Power Sources</i> , 2013, 244, 679-683.	7.8	25
62	Synthesis of niobium-doped titanate nanotubes as solid acid catalysts. <i>Catalysis Science and Technology</i> , 2016, 6, 4832-4839.	4.1	25
63	Effects of magic-angle spinning on spin-lattice relaxations in talc. <i>Solid State Nuclear Magnetic Resonance</i> , 1994, 3, 323-330.	2.3	24
64	NMR study of pore surface and size in the mesoporous material FSM-16. <i>Microporous and Mesoporous Materials</i> , 2000, 39, 25-35.	4.4	23
65	NMR study of the behavior of hydrogen in vanadium hydride. I. Superstructure and diffusion of hydrogen in V <sub>2</sub> H <sub>0.59</sub> . <i>Journal of Chemical Physics</i> , 1982, 76, 4392-4397.	3.0	22
66	NMR study of kaolinite. 2. Proton, aluminum-27, and silicon-29 spin-lattice relaxations. <i>The Journal of Physical Chemistry</i> , 1992, 96, 10928-10933.	2.9	22
67	Interatomic distances in layered silicates and their intercalation compounds as studied by cross polarization NMR. <i>Chemical Physics Letters</i> , 1994, 226, 495-500.	2.6	22
68	Nuclear spin-lattice relaxation mechanisms in kaolinite confirmed by magic-angle spinning. <i>Solid State Nuclear Magnetic Resonance</i> , 1995, 4, 331-340.	2.3	22
69	<sup>51</sup> V and <sup>59</sup> Co Off-MAS NMR Spectra: Determination of Quadrupole Coupling, Chemical Shift Anisotropy and Their Relative Orientation. <i>Magnetic Resonance in Chemistry</i> , 1996, 34, 791-798.	1.9	22
70	Proton dynamics in Cs <sub>2</sub> (HSO <sub>4</sub> )(H <sub>2</sub> PO <sub>4</sub> ) studied by <sup>1</sup> H NMR. <i>Solid State Ionics</i> , 2005, 176, 745-754.	2.7	22
71	Effect of substitutional Mo on diffusion and site occupation of hydrogen in the BCT monohydride phase of V-H system studied by <sup>1</sup> H NMR. <i>Journal of Alloys and Compounds</i> , 2010, 507, 399-404.	5.5	22
72	Mechanochemical Decomposition of Crystalline Cellulose in the Presence of Protonated Layered Niobium Molybdate Solid Acid Catalyst. <i>ChemSusChem</i> , 2018, 11, 888-896.	6.8	22

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73	High-resolution solid-state $^{13}\text{C}$ nuclear magnetic resonance study of the dynamic behaviour of tetramethylammonium ions trapped in zeolites. <i>Journal of the Chemical Society Faraday Transactions I</i> , 1989, 85, 2973.	1.0	21
74	X-ray diffraction and $^1\text{H}$ and $^{51}\text{V}$ NMR study of the $\text{Ti}-\text{V}-\text{H}$ system. <i>Journal of the Less Common Metals</i> , 1990, 161, 61-75.	0.8	21
75	$^1\text{H}$ NMR study of proton dynamics in the inorganic solid acid $\text{Rb}_3\text{H}(\text{SO}_4)_2$ . <i>Physical Review B</i> , 2006, 73, .	3.2	21
76	$^1\text{H}$ NMR study of proton dynamics in $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$ . <i>Solid State Ionics</i> , 2006, 177, 3223-3231.	2.7	20
77	Enhancement of hydrogen diffusion in the body-centered tetragonal monohydride phase of the $\text{V}-\text{H}$ system by substitutional Al studied by proton nuclear magnetic resonance. <i>Acta Materialia</i> , 2015, 83, 479-487.	7.9	20
78	Hydrogen motion and local structure of metals in $\text{Ti}_2\text{Ti}_2\text{V}_2\text{H}_x$ studied by $^1\text{H}$ NMR. <i>Physical Review B</i> , 1993, 48, 5837-5843.	3.2	19
79	Sites and dynamics of hydrogen and deuterium in V-H-D alloys studied by $^1\text{H}$ and $^2\text{H}$ NMR. <i>Physical Review B</i> , 1999, 60, 10302-10315.	3.2	19
80	Destabilizing the Dehydrogenation Thermodynamics of Magnesium Hydride by Utilizing the Immiscibility of Mn with Mg. <i>Inorganic Chemistry</i> , 2019, 58, 14600-14607.	4.0	19
81	Structure of $\text{Ti}_2\text{Ti}_2\text{V}_2\text{H}_x$ alloys studied by X-ray diffraction and by $^1\text{H}$ and $^{51}\text{V}$ NMR. <i>Journal of Solid State Chemistry</i> , 1983, 46, 306-312.	2.9	18
82	Spinning-rate-dependent line shape in $^{31}\text{P}$ magic-angle spinning NMR spectra of inorganic phosphates. <i>Chemical Physics Letters</i> , 1989, 161, 158-162.	2.6	17
83	Effect of substitutional Cr on hydrogen diffusion and thermal stability for the BCT monohydride phase of the $\text{V}-\text{H}$ system studied by $^1\text{H}$ NMR. <i>Journal of Alloys and Compounds</i> , 2012, 524, 63-68.	5.5	17
84	Strategy of thermodynamic and kinetic improvements for Mg hydride nanostructured by immiscible transition metals. <i>Journal of Power Sources</i> , 2021, 494, 229742.	7.8	17
85	Local environments and dynamics of hydrogen atoms in protonated forms of ion-exchangeable layered perovskites estimated by solid-state $^1\text{H}$ NMR. <i>Journal of Solid State Chemistry</i> , 2006, 179, 3357-3364.	2.9	16
86	Local structure in $\text{Ti}_2\text{Ti}_2\text{V}_2\text{H}_x$ studied by inelastic neutron scattering. <i>Physical Review B</i> , 1995, 51, 5725-5731.	3.2	15
87	New organic-inorganic crystalline electrolytes synthesized from 12-phosphotungstic acid and the ionic liquid [BMIM][TFSI]. <i>Electrochimica Acta</i> , 2008, 53, 7638-7643.	5.2	15
88	Synthesis and structural study of Ti-rich Mg-Ti hydrides. <i>Journal of Alloys and Compounds</i> , 2014, 593, 132-136.	5.5	15
89	Multinuclear Solid-State NMR Study of Dehydration of Na-Y Type Zeolites. <i>Bulletin of the Chemical Society of Japan</i> , 1987, 60, 105-109.	3.2	14
90	Sites and dynamics of hydrogen in $\text{Ti}_0.1\text{V}_0.9\text{H}_x\text{D}_y$ ( $x+y=0.7$ ) as studied by $^1\text{H}$ nuclear magnetic resonance. <i>Journal of Alloys and Compounds</i> , 2000, 305, 136-143.	5.5	14

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91	<sup>1</sup> H NMR study of the phase separation and the behavior of hydrogen in Ti <sub>1-x</sub> Y <sub>y</sub> H <sub>x</sub> . Journal of Chemical Physics, 1983, 78, 5096-5102.	3.0	13
92	<sup>1</sup> H NMR study of local structure and proton dynamics in $\delta$ -Ti <sub>1-x</sub> Y <sub>y</sub> H <sub>x</sub> . Journal of Alloys and Compounds, 1995, 231, 226-232.	5.5	13
93	<sup>13</sup> C and <sup>1</sup> H MAS NMR Study of Benzene and p-Xylene in Zeolites and a Mesoporous Material FSM-16. Bulletin of the Chemical Society of Japan, 1997, 70, 97-105.	3.2	13
94	Accurate determination of <sup>1</sup> H Knight shifts in Mg <sub>2</sub> NiH <sub>x</sub> and MgH <sub>x</sub> by means of high-speed magic angle spinning. Journal of Alloys and Compounds, 1997, 248, 66-69.	5.5	13
95	Intermolecular [2+2] Photocycloaddition of Formyl- and Cyano-Substituted Diphenylhexatrienes in the Solid State. Chemistry Letters, 2001, 30, 410-411.	1.3	13
96	Diffusion of hydrogen isotopes and their mutual perturbation in Ti <sub>0.33</sub> V <sub>0.67</sub> H <sub>x</sub> D <sub>y</sub> (x+y=0.9) studied by <sup>1</sup> H and <sup>2</sup> H NMR. Journal of Solid State Chemistry, 2003, 170, 82-93.	2.9	13
97	Dynamics of p-nitroaniline molecules in FSM-type mesoporous silicas studied by solid-state NMR. Microporous and Mesoporous Materials, 2004, 68, 111-118.	4.4	13
98	Adsorption of Trimethylphosphine Oxide Molecules from the Gas Phase to Probe Surface Acidity by Solid-state NMR. Chemistry Letters, 2009, 38, 960-961.	1.3	13
99	Transesterification of Triolein over Hydrophobic Microporous Carbon with SO <sub>3</sub> H Groups. ChemCatChem, 2015, 7, 3945-3950.	3.7	13
100	Selective Formation and SHG Intensity of Noncentrosymmetric and Centrosymmetric 1,1,2,2-Tetramethyl-1-(4-(N,N-dimethylamino)phenyl)-2-(2-cyanophenyl)disilane Crystals under External Stimuli. Journal of Physical Chemistry C, 2020, 124, 17450-17458.	3.1	13
101	Determination of residual dipolar interaction from transverse <sup>1</sup> H NMR relaxation in elastomers. Solid State Nuclear Magnetic Resonance, 2009, 36, 167-171.	2.3	12
102	Intermolecular CH <sup>δ+</sup> -O hydrogen bonds in formyl-substituted diphenylhexatriene, a [2+2] photoreactive organic solid: Crystal structure and IR, NMR spectroscopic evidence. Journal of Molecular Structure, 2011, 1006, 366-374.	3.6	12
103	Distribution and Dynamics of Hydrogen in the Low-Temperature Phase of Mg <sub>2</sub> NiH <sub>4</sub> Studied by Solid-State NMR. Inorganic Chemistry, 2002, 41, 2238-2242.	4.0	11
104	Dynamics of p-nitroaniline molecules in siliceous ZSM-5 studied by solid-state NMR. Physical Chemistry Chemical Physics, 2003, 5, 3777.	2.8	11
105	Probing the Micropores in Linde-type A Zeolites by Helium-3 NMR. Chemistry Letters, 2006, 35, 92-93.	1.3	11
106	Phase transition in a superprotonic conductor Cs <sub>2</sub> (HSO <sub>4</sub> )(H <sub>2</sub> PO <sub>4</sub> ) induced by water vapor. Solid State Ionics, 2006, 177, 1275-1279.	2.7	11
107	Sealing Effect of Magic-Angle-Spinning Rotors in Solid-State NMR. Analytical Sciences, 2009, 25, 133-136.	1.6	11
108	Adsorption of Trimethylphosphine Oxide on Silicalite Studied by Solid-State NMR. Bulletin of the Chemical Society of Japan, 2014, 87, 69-75.	3.2	11



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109	Structural Variation of Self-Organized Mg Hydride Nanoclusters in Immiscible Ti Matrix by Hydrogenation. <i>Inorganic Chemistry</i> , 2018, 57, 11831-11838.	4.0	11
110	Hydrogen distribution in the low-temperature phase of Mg <sub>2</sub> NiH <sub>4</sub> . <i>Journal of the Less Common Metals</i> , 1989, 155, 31-35.	0.8	10
111	<sup>2</sup> H NMR study of sites and dynamics of deuterium and their isotope effects in Ti <sub>0.1</sub> V <sub>0.9</sub> H <sub>x</sub> D <sub>y</sub> (x+y=0.7). <i>Journal of Alloys and Compounds</i> , 2002, 330-332, 443-447.	5.5	10
112	Diffusion of hydrogen isotopes in the monohydride phase of Ti <sub>1-z</sub> V <sub>z</sub> H <sub>x</sub> D <sub>y</sub> studied by <sup>1</sup> H and <sup>2</sup> H NMR spin-lattice relaxation times. <i>Journal of Physics and Chemistry of Solids</i> , 2003, 64, 2227-2234.	4.0	10
113	<sup>1</sup> H NMR study of proton dynamics in Cs <sub>5</sub> H <sub>3</sub> (SO <sub>4</sub> ) <sub>4</sub> ·xH <sub>2</sub> O. <i>Physical Review B</i> , 2006, 74, .	3.2	10
114	Characterization of micropores in zeolites by <sup>3</sup> He NMR. <i>Microporous and Mesoporous Materials</i> , 2007, 101, 3-9.	4.4	10
115	Nanometer Scale Proton Conductivity and Dynamics of CsHSO <sub>4</sub> and H <sub>3</sub> PW <sub>12</sub> O <sub>40</sub> Composites under Non-Humidified Conditions. <i>Chemistry of Materials</i> , 2010, 22, 3418-3425.	6.7	10
116	Formation of hydride phase and diffusion of hydrogen in the V-H system varied by substitutional Fe. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 6369-6375.	7.1	10
117	Enhancement of solid base activity for porous boron nitride catalysts by controlling active structure using post treatment. <i>Applied Catalysis A: General</i> , 2020, 608, 117843.	4.3	10
118	Deuteron dynamics and its isotope effect in <sup>12</sup> Ti <sub>1-y</sub> V <sub>y</sub> D <sub>x</sub> as studied by <sup>2</sup> H NMR. <i>Journal of Alloys and Compounds</i> , 1997, 256, 145-150.	5.5	9
119	Acid Properties of Protonated Titanate Nanotubes. <i>Journal of the Japan Petroleum Institute</i> , 2017, 60, 113-120.	0.6	9
120	A Series of <sup>13</sup> C Structured Disilane-Bridged Triads: Structure and Stimuli-Responsive Luminescence Studies. <i>Journal of Organic Chemistry</i> , 2022, 87, 8928-8938.	3.2	9
121	Local structures and hydrogen dynamics in amorphous and nanostructured Mg <sub>1-x</sub> Ni <sub>x</sub> H systems as studied by <sup>1</sup> H and <sup>2</sup> H nuclear magnetic resonance. <i>Journal of Alloys and Compounds</i> , 1997, 261, 145-149.	5.5	8
122	Proton dynamics in Cs <sub>3</sub> (HSO <sub>4</sub> ) <sub>2</sub> (HPO <sub>4</sub> ) studied by <sup>1</sup> H NMR. <i>Solid State Ionics</i> , 2006, 177, 2873-2880.	2.7	8
123	Acid property of MFI-type zeolites probed by trimethylphosphine oxide studied by solid-state NMR. <i>Microporous and Mesoporous Materials</i> , 2014, 186, 101-105.	4.4	8
124	Structural changes of layered alkylsiloxanes during the reversible melting-solidification process. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 19146-19157.	2.8	8
125	Luminescent Behavior Elucidation of a Disilane-Bridged <sup>13</sup> C Triad Composed of Phenothiazine and Thienopyrazine. <i>Angewandte Chemie</i> , 2021, 133, 23053.	2.0	8
126	NMR study of the behavior of hydrogen in vanadium hydride (2). Superstructures and diffusion of hydrogen at high hydrogen concentration in <sup>12</sup> VH <sub>x</sub> . <i>Journal of Chemical Physics</i> , 1982, 77, 2210-2211.	3.0	7



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127	Gene Expression in the Brain from Fluoxetine-Injected Mouse Using DNA Microarray. <i>Annals of the New York Academy of Sciences</i> , 2006, 1074, 42-51.	3.8	7
128	Using X-ray diffraction to study thermal phase transitions in Cs <sub>5</sub> H <sub>3</sub> (SO <sub>4</sub> ) <sub>4</sub> ·xH <sub>2</sub> O. <i>Solid State Ionics</i> , 2007, 178, 1262-1267.	2.7	7
129	Mixed-cation effect in a superprotonic phase of [(NH <sub>4</sub> ) <sub>1-x</sub> Rbx]3H(SO <sub>4</sub> ) <sub>2</sub> studied by <sup>1</sup> H solid-state NMR. <i>Solid State Ionics</i> , 2008, 179, 599-604.	2.7	7
130	Proton diffusion in the superprotonic phase of [(NH <sub>4</sub> ) <sub>1-x</sub> Rbx]3H(SO <sub>4</sub> ) <sub>2</sub> as studied by <sup>1</sup> H spin-lattice relaxation. <i>Solid State Ionics</i> , 2009, 180, 667-672.	2.7	7
131	Solid-State NMR Study of Titanium Dioxide Nanoparticles Surface-Modified by Alkylphosphonic Acids. <i>Bulletin of the Chemical Society of Japan</i> , 2011, 84, 1267-1275.	3.2	7
132	Formation of "fuzzy" phases with high proton conductivities in the composites of polyphosphoric acid and metal oxide nanoparticles. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 11135.	2.8	7
133	Effect of dissolved oxygen on hydrogenation of vanadium and hydrogen diffusion in the monohydride phase. <i>Acta Materialia</i> , 2016, 103, 23-29.	7.9	7
134	Dynamics of acetonitrile and n-hexane in AlPO <sub>4</sub> -5 studied by <sup>2</sup> H NMR. <i>Microporous and Mesoporous Materials</i> , 2003, 66, 253-260.	4.4	6
135	Proton dynamics in CsHSO <sub>4</sub> confined in mesoporous silica FSM-16 as studied by <sup>1</sup> H solid-state NMR. <i>Microporous and Mesoporous Materials</i> , 2009, 126, 72-80.	4.4	6
136	Undesorbed Dichloromethane in Zeolites Studied by Solid-State NMR. <i>Bulletin of the Chemical Society of Japan</i> , 2011, 84, 1090-1095.	3.2	6
137	Suppression of the Phase Coexistence of the fcc-fct Transition in Hafnium-Hydride Thin Films. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 10969-10974.	4.6	6
138	Thermal desorption spectra of hydrogen isotopes in the monohydride phase of V <sup>16</sup> O <sub>2</sub> and Ti <sup>16</sup> O <sub>2</sub> systems. <i>Journal of Alloys and Compounds</i> , 2003, 359, 281-286.	5.5	5
139	Effects of Na <sup>+</sup> on Dynamics of p-Nitroaniline Molecules in Zeolite ZSM-5 Studied by Solid-State NMR. <i>Bulletin of the Chemical Society of Japan</i> , 2004, 77, 673-679.	3.2	5
140	<sup>1</sup> H NMR study of proton dynamics in [(NH <sub>4</sub> ) <sub>1-x</sub> Rbx]3H(SO <sub>4</sub> ) <sub>2</sub> (x=0.54). <i>Solid State Ionics</i> , 2008, 179, 842-846.	2.7	5
141	Proton diffusion in hybrid materials of CsHSO <sub>4</sub> and silica nanoparticles as studied by <sup>1</sup> H solid-state NMR. <i>Solid State Sciences</i> , 2012, 14, 171-176.	3.2	5
142	Reversibly meltable layered alkylsiloxanes with melting points controllable by alkyl chain lengths. <i>New Journal of Chemistry</i> , 2013, 37, 1142.	2.8	5
143	Detailed mechanisms of <sup>1</sup> H spin-lattice relaxation in ammonium dihydrogen phosphate confirmed by magic angle spinning. <i>Solid State Nuclear Magnetic Resonance</i> , 2017, 87, 24-28.	2.3	5
144	Effect of Water Vapor on the Accelerated Deterioration Treatment of Cu-SSZ-13 as Catalysts for Selective Catalytic Reduction. <i>Industrial &amp; Engineering Chemistry Research</i> , 2021, 60, 15454-15463.	3.7	5

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146	Dynamics of <i>p</i> -Nitroaniline Molecules in Microporous Aluminophosphate $\text{AlPO}_4\text{-5}$ Studied by Solid-State NMR. Journal of Physical Chemistry B, 2006, 110, 90-96.	2.6	4
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148	Ammonium ion diffusion in the superprotonic phase of $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$ as studied by $^1\text{H}$ spin-lattice relaxation times in the rotating frame. Solid State Ionics, 2008, 178, 1792-1797.	2.7	4
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153	Effects of structural differences in starting materials on the formation behavior of cubic silicon nitride by shock compression. Journal of the Ceramic Society of Japan, 2013, 121, 741-744.	1.1	3
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