Miki Niwa

List of Publications by Year in descending order

128 papers	5,728 citations	61984 43 h-index	82547 72 g-index
130 all docs	130 docs citations	130 times ranked	4093 citing authors

#	Article	IF	Citations
1	Determination of the Acidic Properties of Zeolite by Theoretical Analysis of Temperature-Programmed Desorption of Ammonia Based on Adsorption Equilibrium. Journal of Physical Chemistry B, 1997, 101, 5969-5977.	2.6	374
2	Toluene combustion over palladium supported on various metal oxide supports. Applied Catalysis B: Environmental, 2003, 44, 325-331.	20.2	187
3	Measurements of acidic property of zeolites by temperature programmed desorption of ammonia. Catalysis Surveys From Asia, 1997, 1, 215-226.	1.2	181
4	Temperature-Programmed Desorption of Ammonia with Readsorption Based on the Derived Theoretical Equation. The Journal of Physical Chemistry, 1995, 99, 8812-8816.	2.9	172
5	New Method for the Temperature- Programmed Desorption (TPD) of Ammonia Experiment for Characterization of Zeolite Acidity: A Review. Chemical Record, 2013, 13, 432-455.	5.8	156
6	X-ray Absorption Fine Structure Study of the Formation of the Highly Dispersed PdO over ZSM-5 and the Structural Change of Pd Induced by Adsorption of NO. Journal of Physical Chemistry B, 2000, 104, 1050-1057.	2.6	149
7	Fine control of the pore-opening size of zeolite ZSM-5 by chemical vapor deposition of silicon methoxide. The Journal of Physical Chemistry, 1986, 90, 6233-6237.	2.9	148
8	Complete oxidation of methane on supported palladium catalyst: Support effect. Applied Catalysis A: General, 1996, 134, 203-215.	4.3	131
9	Support effect of zeolite on the methane combustion activity of palladium. Applied Catalysis B: Environmental, 2003, 40, 151-159.	20.2	129
10	Superacidity and Catalytic Activity of Sulfated Zirconia. Journal of Physical Chemistry B, 2000, 104, 10321-10328.	2.6	125
11	Correlation between BrÃ¸nsted Acid Strength and Local Structure in Zeolites. Journal of Physical Chemistry C, 2009, 113, 19208-19217.	3.1	122
12	Tungsten Oxide Monolayer Loaded on Zirconia:â€‰ Determination of Acidity Generated on the Monolayer. Journal of Physical Chemistry B, 1999, 103, 7206-7213.	2.6	113
13	Ammonia IRMS-TPD Study on the Distribution of Acid Sites in Mordenite. Journal of Physical Chemistry B, 2005, 109, 18749-18757.	2.6	112
14	Modification of HZSM-5 by CVD of Various Silicon Compounds and Generation of Para-Selectivity. Journal of Catalysis, 1996, 161, 387-392.	6.2	110
15	Acidity of Î² zeolite with different Si/Al2 ratio as measured by temperature programmed desorption of ammonia. Microporous and Mesoporous Materials, 2000, 40, 271-281.	4.4	109
16	Relationship between acid amount and framework aluminum content in mordenite. Zeolites, 1990, 10, 532-538.	0.5	106
17	IRMS-TPD of ammonia: Direct and individual measurement of BrÃ¸nsted acidity in zeolites and its relationship with the catalytic cracking activity. Journal of Catalysis, 2007, 250, 151-160.	6.2	105
18	Temperature-Programmed Desorption of Ammonia on Zeolites. Influence of the Experimental Conditions on the Acidity Measurement. Bulletin of the Chemical Society of Japan, 1986, 59, 3735-3739.	3.2	102

#	Article	IF	Citations
19	Morphology of molybdena supported on various oxides and its activity for methanol oxidation. The Journal of Physical Chemistry, 1990, 94, 1477-1482.	2.9	101
20	Thin silica layer on alumina: evidence of the acidity in the monolayer. The Journal of Physical Chemistry, 1990, 94, 6441-6445.	2.9	94
21	Analysis of Acidic Properties of Zeolitic and Non-Zeolitic Solid Acid Catalysts Using Temperature-Programmed Desorption of Ammonia. Catalysis Surveys From Asia, 2004, 8, 161-170.	2.6	84
22	Generation of Shape-Selectivity ofp-Xylene Formation in the Synthesized ZSM-5 Zeolites. Journal of Catalysis, 1998, 173, 433-439.	6.2	83
23	Combined study of IRMS-TPD measurement and DFT calculation on BrÃ¸nsted acidity and catalytic cracking activity of cation-exchanged Y zeolites. Journal of Catalysis, 2008, 259, 203-210.	6.2	81
24	Activity of supported platinum catalysts for methane oxidation. Applied Catalysis, 1983, 7, 317-325.	0.8	74
25	IRMSâ€“TPD of ammonia for characterization of acid site in Î²-zeolite. Microporous and Mesoporous Materials, 2005, 82, 105-112.	4.4	72
26	Acidic Property of MFI-Type Gallosilicate Determined by Temperature-Programmed Desorption of Ammonia. Journal of Physical Chemistry B, 1998, 102, 6738-6745.	2.6	70
27	Identification and Measurements of Strong BrÃ¸nsted Acid Site in Ultrastable Y (USY) Zeolite. Journal of Physical Chemistry B, 2006, 110, 264-269.	2.6	66
28	Pd loaded on high silica beta support active for the total oxidation of diluted methane in the presence of water vapor. Catalysis Today, 2006, 117, 577-583.	4.4	66
29	Energy-Dispersive XAFS Studies on the Spontaneous Dispersion of PdO and the Formation of Stable Pd Clusters in Zeolites. Journal of Physical Chemistry B, 2004, 108, 6250-6255.	2.6	59
30	Origin of the excellent catalytic activity of Pd loaded on ultra-stable Y zeolites in Suzukiâ€“Miyaura reactions. Journal of Catalysis, 2010, 273, 156-166.	6.2	58
31	Support Effect of Metal Oxide on Rh Catalysts in the CH4-CO2 Reforming Reaction. Catalysis Letters, 2002, 84, 131-134.	2.6	56
32	Detection and Quantitative Measurements of Four Kinds of OH in HY Zeolite. Journal of Physical Chemistry C, 2007, 111, 894-900.	3.1	54
33	Biodiesel production using heteropoly acid-derived solid acid catalyst H4PNbW11O40/WO3â€“Nb2O5. Applied Catalysis A: General, 2009, 363, 164-168.	4.3	53
34	Regulation of the Dispersion of PdO through the Interaction with Acid Sites of Zeolite Studied by Extended X-ray Absorption Fine Structure. Journal of Physical Chemistry B, 2000, 104, 9670-9675.	2.6	52
35	Correlation of the cracking activity with solid acidity and adsorption property on zeolites. Applied Catalysis A: General, 2010, 373, 208-213.	4.3	52
36	Acidic Property of Y- and Mordenite-Type Zeolites with High Aluminum Concentration under Dry Conditions. Journal of Physical Chemistry B, 2000, 104, 7561-7564.	2.6	51

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37	Ammonia IRMS-TPD measurements and DFT calculation on acidic hydroxyl groups in CHA-type zeolites. Physical Chemistry Chemical Physics, 2007, 9, 5980.	2.8	51
38	Inactivation of external surface of mordenite and ZSM-5 by chemical vapor deposition of silicon alkoxide. Zeolites, 1993, 13, 518-523.	0.5	50
39	Dependence of selective reduction of NO with C3H6 on acid properties of ion-exchanged zeolites. Catalysis Letters, 1995, 31, 367-375.	2.6	49
40	Additional acid site on HZSM-5 treated with basic and acidic solutions as detected by temperature-programmed desorption of ammonia. Microporous and Mesoporous Materials, 2003, 66, 283-296.	4.4	48
41	Analysis of Toluene Adsorption on Na-Form Zeolite with a Temperature-Programmed Desorption Method. Journal of Physical Chemistry C, 2007, 111, 1474-1479.	3.1	47
42	Strong BrÃ¸nsted acid site in HZSM-5 created by mild steaming. Catalysis Today, 2012, 185, 17-24.	4.4	46
43	Acid-leached dealuminated mordenite: Effect of acid concentration on catalyst life in methanol conversion. Applied Catalysis, 1989, 53, 169-181.	0.8	44
44	Detection of active sites for paraffin cracking on USY zeolite by 27Al MQMAS NMR operated at high magnetic field 16 T. Journal of Molecular Catalysis A, 2005, 236, 239-245.	4.8	43
45	Measurement of exposed surface area of supports on supported metal oxide catalysts. The Journal of Physical Chemistry, 1985, 89, 3869-3872.	2.9	42
46	Structure of vanadium oxide on supports as measured by the benzaldehyde-ammonia titration method. The Journal of Physical Chemistry, 1987, 91, 4519-4524.	2.9	42
47	Strong Acidity of MFI-Type Ferrisilicate Determined by Temperature-Programmed Desorption of Ammonia. Journal of Physical Chemistry B, 2000, 104, 5511-5518.	2.6	42
48	Solid acidity of metal oxide monolayer and its role in catalytic reactions. Catalysis Today, 2003, 87, 213-218.	4.4	42
49	Silica Monolayer Solid-Acid Catalyst Prepared by CVD. Chemical Vapor Deposition, 1996, 2, 125-134.	1.3	40
50	Measurements of number and strength distribution of BrÃ¸nsted and Lewis acid sites on sulfated zirconia by ammonia IRMSâ€“TPD method. Applied Catalysis A: General, 2008, 340, 76-86.	4.3	40
51	Characterization and Design of Zeolite Catalysts. Springer Series in Materials Science, 2010, , .	0.6	40
52	Acidic Properties of Cage-Based, Small-Pore Zeolites with Different Framework Topologies and Their Silicoaluminophosphate Analogues. Journal of Physical Chemistry C, 2011, 115, 22505-22513.	3.1	40
53	Acid Properties and Catalysis of MCM-22 with Different Al Concentrations. Journal of Catalysis, 2002, 206, 23-28.	6.2	39
54	A study on the preparation of supported metal oxide catalysts using JRC-reference catalysts. I. Preparation of a molybdenaâ€“alumina catalyst. Part 1. Surface area of alumina. Applied Catalysis A: General, 1998, 170, 315-328.	4.3	38

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55	Periodic Density Functional Calculation on the BrÃ¸nsted Acidity of Modified Y-Type Zeolite. Journal of Physical Chemistry C, 2009, 113, 5672-5680.	3.1	38
56	Role of the solid acidity on the MoO3 loaded on SnO2 in the methanol oxidation into formaldehyde. Catalysis Today, 1999, 52, 71-81.	4.4	37
57	Benzaldehyde-ammonia titration method for discrimination between surfaces of metal oxide catalysts. Applied Catalysis, 1990, 67, 297-305.	0.8	36
58	Dependence of cracking activity on the BrÃ¸nsted acidity of Y zeolite: DFT study and experimental confirmation. Catalysis Science and Technology, 2013, 3, 1919.	4.1	35
59	Novel supporting materials of lipase PS suitable for use in an ionic liquid solvent system. Green Chemistry, 2003, 5, 494-496.	9.0	33
60	Molecular Shape Recognition by a Tin Oxide Chemical Sensor Coated with a Silica Overlayer Precisely Designed Using an Organic Molecule as the Template. Langmuir, 2000, 16, 3858-3865.	3.5	31
61	Alumina: sites and mechanism for benzaldehyde and ammonia reaction. The Journal of Physical Chemistry, 1985, 89, 2550-2555.	2.9	30
62	Synthesis of aniline from phenol and ammonia over zeolite beta. Studies in Surface Science and Catalysis, 1997, 105, 1227-1234.	1.5	30
63	Ammonia IRMS-TPD measurements on BrÃ¸nsted acidity of proton-formed SAPO-34. Physical Chemistry Chemical Physics, 2011, 13, 3311-3318.	2.8	30
64	Title is missing!. Catalysis Letters, 2002, 80, 47-51.	2.6	29
65	Catalytic activity and solid acidity of vanadium oxide thin layer loaded on TiO2, ZrO2, and SnO2. Catalysis Today, 2003, 78, 131-138.	4.4	28
66	Hydrothermal synthesis and catalysis of Nb₂O₅â€“WO_xnanofiber crystal. Journal of Materials Chemistry, 2011, 21, 229-235.	6.7	28
67	Characterization of sulfated zirconia prepared using reference catalysts and application to several model reactions. Applied Catalysis A: General, 2009, 360, 89-97.	4.3	27
68	A heat-resisting acid catalyst: Thermal stability and acidity of a thin silica layer on alumina calcined at 1493 K. Chemical Vapor Deposition, 1995, 1, 54-60.	1.3	25
69	Dealumination of proton form mordenite with high aluminum content in atmosphere. Microporous and Mesoporous Materials, 2004, 75, 61-67.	4.4	25
70	Methanol oxidation on a molybdena monolayer supported on iron oxide. Applied Catalysis A: General, 1993, 96, 113-123.	4.3	24
71	Metal-Support Interaction Which Controls the Oxidation State, Structure and Catalysis of Pd. Catalysis Surveys From Asia, 2002, 5, 121-126.	1.2	24
72	Quantitative Measurements of BrÃ¸nsted Acidity of Zeolites by Ammonia IRMSâ€“TPD Method and Density Functional Calculation. Chemistry Letters, 2007, 36, 1034-1035.	1.3	23

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73	HZSM-5 modified by silica CVD for shape-selective production of p-xylene: Influence of in situ and ex situ preparation conditions of the zeolite. Microporous and Mesoporous Materials, 2009, 117, 523-529.	4.4	23
74	Evolution of strong acidity and high-alkane-cracking activity in ammonium-treated USY zeolites. Applied Catalysis A: General, 2011, 405, 8-17.	4.3	23
75	Production of ethanol by vapor phase hydration of ethene over tungsta monolayer catalyst loaded on titania. Applied Catalysis A: General, 2008, 349, 55-61.	4.3	22
76	Quantitative analysis of acidic OH groups in zeolite by ammonia IRMS-TPD and DFT: Application to BEA. Catalysis Today, 2014, 226, 37-46.	4.4	22
77	Stepwise Growth of Pd Clusters in USY Zeolite at Room Temperature Analyzed by QXAFS. Journal of Physical Chemistry C, 2008, 112, 16740-16747.	3.1	21
78	Thermally stable environmental catalyst: oxidation of methane over calcined palladium loaded on silica monolayer. Catalysis Today, 1997, 35, 145-151.	4.4	20
79	Synthesis of Al-containing mesoporous silica (KSW-2) with semi-squared channels by incorporation of Al into the framework of kanemiteElectronic supplementary information (ESI) available: powder XRD patterns and 29Si MAS NMR spectra of kanemite and Al-kanemite, N2 adsorption isotherm of Al-KSW-2, TEM images of Al-KSW-2. See http://www.rsc.org/suppdata/jm/b2/b211073c/. Journal of Materials Chemistry, 2003, 13, 883-887.	6.7	19
80	High catalytic activity for synthesis of aniline from phenol and ammonia found on gallium-containing MFI. Applied Catalysis A: General, 1999, 180, L1-L3.	4.3	18
81	Durable and selective activity of Pd loaded on WO3/ZrO2 for NOî—¸CH4î—¸O2 in the presence of water vapor. Applied Catalysis B: Environmental, 2003, 41, 137-142.	20.2	18
82	Decrease of catalytic activity and solid acidity by ion exchange of Na cation on HZSM-5. Catalysis Today, 2004, 97, 35-39.	4.4	18
83	In-Situ QXAFS Studies on the Dynamic Coalescence and Dispersion Processes of Pd in the USY Zeolite. Journal of Physical Chemistry C, 2007, 111, 14426-14432.	3.1	18
84	Germanium oxide mono-atomic layer prepared by chemical vapor deposition method on ?-alumina: the structure and acidic property. Catalysis Letters, 1995, 32, 131-138.	2.6	17
85	Control of the Dispersion of Pd Through the Interaction with Acid Sites of Zeolite Studied by EXAFS. Topics in Catalysis, 2002, 18, 85-89.	2.8	17
86	Periodic DFT Calculation of the Energy of Ammonia Adsorption on Zeolite BrÃ¸nsted Acid Sites to Support the Ammonia IRMSâ€“TPD Experiment. Chemistry Letters, 2009, 38, 354-355.	1.3	17
87	Chemical vapor deposition of silica on silicalite crystals and shape-selective adsorption of paraffins. Microporous and Mesoporous Materials, 2001, 46, 13-21.	4.4	16
88	Standardization of catalyst preparation using reference catalyst: ion exchange of mordenite type zeolite. Applied Catalysis A: General, 2005, 283, 63-74.	4.3	16
89	Standardization of catalyst preparation using reference catalyst: ion exchange of mordenite type zeolite. Applied Catalysis A: General, 2005, 283, 75-84.	4.3	16
90	Cooperative effect induced by the mixing of Na-ZSM-5 and Pd/H3PW12O40/SiO2 in the selective catalytic reduction of NO with aromatic hydrocarbons. Applied Catalysis B: Environmental, 2007, 75, 175-181.	20.2	16

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91	Ammonia IRMS-TPD Characterization of BrÃ¸nsted Acid Sites in Medium-pore Zeolites with Different Framework Topologies. Topics in Catalysis, 2010, 53, 664-671.	2.8	16
92	Microstructure of silica monolayer solid acid catalysts determined by 29Si NMR spectroscopy. Research on Chemical Intermediates, 1998, 24, 481-494.	2.7	15
93	One-point method for determining acid strength of zeolite by temperature-programmed desorption of ammonia. Zeolites, 1991, 11, 93-94.	0.5	14
94	Control of the pore-opening size of HY zeolite by CVD of silicon alkoxide. Microporous and Mesoporous Materials, 1999, 32, 37-44.	4.4	14
95	Studies on the Formation and Structure of Highly Dispersed PdO Interacted with BrÃ¸nsted Acid Sites on Zeolite by EXAFS. Chemistry Letters, 1999, 28, 997-998.	1.3	14
96	Title is missing!. Catalysis Letters, 2001, 71, 63-67.	2.6	13
97	Development of Long-life Dealuminated Mordenite for Methanol Conversion to Hydrocarbons. Chemistry Letters, 1987, 16, 1637-1640.	1.3	12
98	Characterization of acid sites on the external surface of zeolites. Reaction Kinetics and Catalysis Letters, 1999, 67, 281-287.	0.6	12
99	Silica Overlayers Prepared Using Organic Template Molecules on Tin Oxide and Its Molecular Sieving Property. Chemical Vapor Deposition, 1997, 3, 59-66.	1.3	11
100	Spontaneous Dispersion of PdO onto Acid Sites of Zeolites Studied by in situ DXAFS. Chemistry Letters, 2003, 32, 636-637.	1.3	11
101	Enhancement of the Catalytic Activity of a Dawson-type Heteropoly Acid Induced by the Loading on a Silica Support. Topics in Catalysis, 2009, 52, 649-656.	2.8	11
102	Super acidity confirmed on a monolayer of sulfate species loaded on zirconia. Studies in Surface Science and Catalysis, 2000, 130, 3213-3218.	1.5	9
103	Enhancement of Tolerance to the Humidity by Chemical Vapor Deposition of Silicon Alkoxide on Pd-Mordenite Catalyst in the Reaction of NO, Methane and Oxygen. Chemistry Letters, 1996, 25, 275-276.	1.3	8
104	Acidity and cracking activity on MgHY zeolite. Microporous and Mesoporous Materials, 2011, 146, 208-215.	4.4	7
105	One-point method for the determination of strength of zeolite acidity by temperature programmed desorption of ammonia based on trouton's rule. Studies in Surface Science and Catalysis, 1995, 98, 101-103.	1.5	6
106	Catalytic activity of Pd loaded on WO3/Al2O3 for NOâ€“CH4â€“O2 in the presence of water vapor. Catalysis Today, 2003, 84, 159-164.	4.4	6
107	Oxidation of Sulfur Dioxide to Sulfuric Acid over Activated Carbon Catalyst Produced from Wood. Journal of the Japan Petroleum Institute, 2003, 46, 392-395.	0.6	5
108	Selective Catalytic Reduction of NO by Methane over Pd Loaded on Heteropolyacids/SiO2at Low Temperature. Bulletin of the Chemical Society of Japan, 2005, 78, 361-366.	3.2	5

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109	Combined Method of Ammonia IRMS-TPD Experiment and DFT Calculation to Characterize Zeolite Acidity. Journal of the Japan Petroleum Institute, 2009, 52, 172-179.	0.6	5
110	A Continuous-Flow Method for Chemical Vapor Deposition of Tetramethoxysilane on .GAMMA.-Alumina to Prepare Silica Monolayer Solid Acid Catalyst.. Journal of Chemical Engineering of Japan, 2001, 34, 306-311.	0.6	4
111	Effect of Acid Sites on Deactivation of Methanol Conversion over Modified Mordenites.. Kagaku Kogaku Ronbunshu, 1995, 21, 1120-1126.	0.3	3
112	What Preferentially Determines the para Shape Selectivity: Diffusion of Molecules or External Surface Acidity. ACS Symposium Series, 1999, , 181-187.	0.5	3
113	Water vapor tolerance of the Pd/HZSM-5 in the NO-methane-O2 reaction: its relation with very strong solid acidity of zeolite support. Studies in Surface Science and Catalysis, 2000, 130, 905-910.	1.5	3
114	37 Catalytic activity of gallium-loaded ZSM-5 zeolite for synthesis of aniline from phenol and ammonia. Studies in Surface Science and Catalysis, 2003, , 197-200.	1.5	3
115	Solid Acidity of Zeolites. Springer Series in Materials Science, 2010, , 9-27.	0.6	3
116	Measurements of Acidity of H-SSZ-35 by a Combined Method of IRMS-TPD Experiment and DFT Calculation. Catalysis Letters, 2010, 140, 134-139.	2.6	2
117	IRMS-TPD Measurements of Acid Sites. Springer Series in Materials Science, 2010, , 29-59.	0.6	1
118	Activity of Barium-ion Exchanged Dealuminated Mordenite for Methanol Conversion into Hydrocarbons.. Sekiyu Gakkaishi (Journal of the Japan Petroleum Institute), 1993, 36, 38-43.	0.1	1
119	Solid Acidity on Zeolites and Metal Oxide Monolayers Measured by the Temperature Programmed Desorption of Ammonia. Hyomen Kagaku, 2003, 24, 635-641.	0.0	1
120	Proposal of cooperative study toward establishing asiacatalyst. Korean Journal of Chemical Engineering, 1997, 14, 519-520.	2.7	0
121	Improvement of the Catalytic Performance of Pd/WO3/ZrO2in the Selective NOâ€“CH4â€“O2Reaction by the Addition of Water Vapor. Chemistry Letters, 2001, 30, 1018-1019.	1.3	0
122	Catalytic Reaction on the Palladium-Loaded Zeolites. Springer Series in Materials Science, 2010, , 163-179.	0.6	0
123	Application of the CVD of Silica to the Shape Selective Reaction. Springer Series in Materials Science, 2010, , 129-147.	0.6	0
124	CVD of Silica for the Shape Selective Reaction. Springer Series in Materials Science, 2010, , 103-127.	0.6	0
125	Production of Activated Carbon by Simple Steaming of Wood. Kagaku Kogaku Ronbunshu, 2003, 29, 488-492.	0.3	0
126	Trinity Study on the Zeolite Acidity using Thermal Measurements, Spectroscopy, and Density Functional Theory Calculation. Hyomen Kagaku, 2009, 30, 104-110.	0.0	0

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127	Catalytic Activity and Adsorption Property. Springer Series in Materials Science, 2010, , 79-101.	0.6	0
128	Catalysts prepared by CVD method and their functions.. Hyomen Kagaku, 1990, 11, 104-109.	0.0	0