

Katsutoshi Nagaoka

List of Publications by Year in descending order

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112
papers

4,072
citations

136740

32
h-index

123241

61
g-index

120
all docs

120
docs citations

120
times ranked

4084
citing authors

#	ARTICLE	IF	CITATIONS
1	Titania-supported cobalt and nickel bimetallic catalysts for carbon dioxide reforming of methane. <i>Journal of Catalysis</i> , 2005, 232, 268-275.	3.1	396
2	Discovery of Face-Centered-Cubic Ruthenium Nanoparticles: Facile Size-Controlled Synthesis Using the Chemical Reduction Method. <i>Journal of the American Chemical Society</i> , 2013, 135, 5493-5496.	6.6	290
3	Solid Solution Alloy Nanoparticles of Immiscible Pd and Ru Elements Neighboring on Rh: Changeover of the Thermodynamic Behavior for Hydrogen Storage and Enhanced CO-Oxidizing Ability. <i>Journal of the American Chemical Society</i> , 2014, 136, 1864-1871.	6.6	229
4	Carbon Deposition during Carbon Dioxide Reforming of Methane—Comparison between Pt/Al ₂ O ₃ and Pt/ZrO ₂ . <i>Journal of Catalysis</i> , 2001, 197, 34-42.	3.1	183
5	A low-crystalline ruthenium nano-layer supported on praseodymium oxide as an active catalyst for ammonia synthesis. <i>Chemical Science</i> , 2017, 8, 674-679.	3.7	149
6	Modification of Co/TiO ₂ for dry reforming of methane at 2MPa by Pt, Ru or Ni. <i>Applied Catalysis A: General</i> , 2004, 268, 151-158.	2.2	145
7	Efficient ammonia synthesis over a Ru/La _{0.5} Ce _{0.5} O _{1.75} catalyst pre-reduced at high temperature. <i>Chemical Science</i> , 2018, 9, 2230-2237.	3.7	142
8	Influence of reduction temperature on the catalytic behavior of Co/TiO ₂ catalysts for CH ₄ /CO ₂ reforming and its relation with titania bulk crystal structure. <i>Journal of Catalysis</i> , 2005, 230, 75-85.	3.1	117
9	Methane autothermal reforming with and without ethane over mono- and bimetal catalysts prepared from hydrotalcite precursors. <i>Journal of Catalysis</i> , 2005, 229, 185-196.	3.1	106
10	Titania supported ruthenium as a coking-resistant catalyst for high pressure dry reforming of methane. <i>Catalysis Communications</i> , 2001, 2, 255-260.	1.6	95
11	Solid-Solution Alloying of Immiscible Ru and Cu with Enhanced CO Oxidation Activity. <i>Journal of the American Chemical Society</i> , 2017, 139, 4643-4646.	6.6	94
12	Influence of the reduction temperature on catalytic activity of Co/TiO ₂ (anatase-type) for high pressure dry reforming of methane. <i>Applied Catalysis A: General</i> , 2003, 255, 13-21.	2.2	86
13	Oxidative Activation of n-Butane on Sulfated Zirconia. <i>Journal of the American Chemical Society</i> , 2005, 127, 16159-16166.	6.6	86
14	Carbon-free H ₂ production from ammonia triggered at room temperature with an acidic RuO ₂ /Al ₂ O ₃ catalyst. <i>Science Advances</i> , 2017, 3, e1602747.	4.7	78
15	Labile sulfates as key components in active sulfated zirconia for n-butane isomerization at low temperatures. <i>Journal of Catalysis</i> , 2004, 227, 130-137.	3.1	76
16	The Pr promotion effect on oxygen storage capacity of Ce-Pr oxides studied using a TAP reactor. <i>Applied Catalysis A: General</i> , 2007, 329, 86-92.	2.2	73
17	Influence of basic dopants on the activity of Ru/Pr ₆ O ₁₁ for hydrogen production by ammonia decomposition. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 20731-20735.	3.8	65
18	Influence of the phase composition of titania on catalytic behavior of Co/TiO ₂ for the dry reforming of methane. <i>Chemical Communications</i> , 2002, , 1006-1007.	2.2	64

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19	Synthesis of highly active sulfated zirconia by sulfation with SO ₃ . Journal of Catalysis, 2006, 238, 39-45.	3.1	61
20	Ru/La _{0.5} Pr _{0.5} O _{1.75} Catalyst for Low-Temperature Ammonia Synthesis. ACS Sustainable Chemistry and Engineering, 2018, 6, 17258-17266.	3.2	57
21	Title is missing!. Catalysis Letters, 2000, 70, 109-116.	1.4	56
22	Improved resistance against coke deposition of titania supported cobalt and nickel bimetallic catalysts for carbon dioxide reforming of methane. Catalysis Letters, 2005, 102, 153-157.	1.4	56
23	Surface Dynamics for Creating Highly Active Ru Sites for Ammonia Synthesis: Accumulation of a Low-Crystalline, Oxygen-Deficient Nanofraction. ACS Sustainable Chemistry and Engineering, 2020, 8, 2726-2734.	3.2	50
24	Supported Ni catalysts prepared from hydrotalcite-like compounds for the production of hydrogen by ammonia decomposition. International Journal of Hydrogen Energy, 2017, 42, 6610-6617.	3.8	49
25	Catalytic activity of rare earth phosphates for SF ₆ decomposition and promotion effects of rare earths added into AlPO ₄ . Journal of Colloid and Interface Science, 2009, 332, 136-144.	5.0	48
26	A CO Adsorption Site Change Induced by Copper Substitution in a Ruthenium Catalyst for Enhanced CO Oxidation Activity. Angewandte Chemie - International Edition, 2019, 58, 2230-2235.	7.2	48
27	Oxidative dehydrogenation of isobutane to isobutene III. Applied Catalysis A: General, 2005, 296, 63-69.	2.2	44
28	Interaction between sulfated zirconia and alkanes: prerequisites for active sites' formation and stability of reaction intermediates. Journal of Catalysis, 2005, 230, 214-225.	3.1	44
29	Mechanism of butane skeletal isomerization on sulfated zirconia. Journal of Catalysis, 2005, 232, 456-466.	3.1	44
30	A Synthetic Pseudo-Rh: NO _x Reduction Activity and Electronic Structure of Pd-Ru Solid-solution Alloy Nanoparticles. Scientific Reports, 2016, 6, 28265.	1.6	44
31	Metal Phosphate Catalysts Effective for Degradation of Sulfur Hexafluoride. Industrial & Engineering Chemistry Research, 2009, 48, 632-640.	1.8	39
32	Highly Active Cs ₂ O/Ru/Pr ₆ O ₁₁ as a Catalyst for Ammonia Decomposition. Chemistry Letters, 2010, 39, 918-919.	0.7	37
33	Kinetics of ammonia synthesis over Ru/Pr ₂ O ₃ . Journal of the Taiwan Institute of Chemical Engineers, 2019, 105, 50-56.	2.7	35
34	Influence of the Crystal Structure of Titanium Oxide on the Catalytic Activity of Rh/TiO ₂ in Steam Reforming of Propane at Low Temperature. Chemistry - A European Journal, 2018, 24, 8742-8746.	1.7	28
35	Barium Oxide Encapsulating Cobalt Nanoparticles Supported on Magnesium Oxide: Active Non-Noble Metal Catalysts for Ammonia Synthesis under Mild Reaction Conditions. ACS Catalysis, 2021, 11, 13050-13061.	5.5	28
36	First-Principles Calculation, Synthesis, and Catalytic Properties of Rh-Cu Alloy Nanoparticles. Chemistry - A European Journal, 2017, 23, 57-60.	1.7	26

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37	One-pot synthesis of pyrrolidones from levulinic acid and amines/nitroarenes/nitriles over the Ir-PVP catalyst. <i>Green Chemistry</i> , 2020, 22, 7760-7764.	4.6	26
38	The Effect of SnO ₂ Addition to Li/MgO Catalysts for the Oxidative Coupling of Methane. <i>Journal of Catalysis</i> , 1999, 181, 160-164.	3.1	25
39	Hydrogen Production from Bioethanol: Oxidative Steam Reforming of Aqueous Ethanol Triggered by Oxidation of Ni/Ce _{0.5} Zr _{0.5} O ₂ at Low Temperature. <i>ChemSusChem</i> , 2010, 3, 1364-1366.	3.6	25
40	Dual Lewis Acidic/Basic Pd _{0.5} Ru _{0.5} ~Poly(N-vinyl-2-pyrrolidone) Alloyed Nanoparticle: Outstanding Catalytic Activity and Selectivity in Suzuki~Miyaura Cross-Coupling Reaction. <i>ChemCatChem</i> , 2015, 7, 3887-3894.	1.8	25
41	Influence of support on catalytic behavior of nickel catalysts in oxidative steam prereforming of n-butane for fuel cell applications. <i>Applied Catalysis A: General</i> , 2007, 327, 139-146.	2.2	24
42	n-C ₄ H ₁₀ autothermal reforming over MgO-supported base metal catalysts. <i>International Journal of Hydrogen Energy</i> , 2009, 34, 333-342.	3.8	24
43	Ammonia synthesis over lanthanoid oxide~supported ruthenium catalysts. <i>Catalysis Today</i> , 2021, 376, 36-40.	2.2	24
44	Boosting Ammonia Synthesis under Mild Reaction Conditions by Precise Control of the Basic Oxide~Ru Interface. <i>Chemistry Letters</i> , 2021, 50, 687-696.	0.7	24
45	Preparation and characterization of active Ni/MgO in oxidative steam reforming of n-C ₄ H ₁₀ . <i>International Journal of Hydrogen Energy</i> , 2010, 35, 5393-5399.	3.8	22
46	Highly Stable and Active Solid~Solution~Alloy Three~Way Catalyst by Utilizing Configurational~Entropy Effect. <i>Advanced Materials</i> , 2021, 33, e2005206.	11.1	22
47	Synthesis and catalytic application of PVP-coated Ru nanoparticles embedded in a porous metal~organic framework. <i>Dalton Transactions</i> , 2014, 43, 11295-11298.	1.6	21
48	Metal phosphate and fluoride catalysts active for hydrolysis of NF ₃ . <i>Catalysis Communications</i> , 2009, 11, 147-150.	1.6	20
49	Influence of calcination procedure on the catalytic property of sulfated zirconia. <i>Catalysis Letters</i> , 2007, 113, 34-40.	1.4	18
50	Effect of the nature of rhodium catalyst supports on initiation of H ₂ production during n-butane oxidative reforming at room temperature. <i>Journal of Catalysis</i> , 2012, 287, 86-92.	3.1	18
51	Selective Hydrogenation of Nitriles to Secondary Imines over Rh-PVP Catalyst under Mild Conditions. <i>Chemistry Letters</i> , 2018, 47, 938-940.	0.7	18
52	Nonequilibrium Flow-Synthesis of Solid-Solution Alloy Nanoparticles: From Immiscible Binary to High-Entropy Alloys. <i>Journal of Physical Chemistry C</i> , 2021, 125, 458-463.	1.5	18
53	Highly active Ni/MgO in oxidative steam pre-reforming of n-butane for fuel cell application. <i>Catalysis Communications</i> , 2007, 8, 1807-1810.	1.6	17
54	Recyclable Rh-PVP nanoparticles catalyzed hydrogenation of benzoic acid derivatives and quinolines under solvent-free conditions. <i>Catalysis Communications</i> , 2019, 126, 55-60.	1.6	16

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55	Rh/Ce _{0.25} Zr _{0.75} O ₂ Catalyst for Steam Reforming of Propane at Low Temperature. ChemCatChem, 2019, 11, 1472-1479.	1.8	16
56	Facile Synthesis of Size-controlled Rh Nanoparticles via Microwave-assisted Alcohol Reduction and Their Catalysis of CO Oxidation. Chemistry Letters, 2017, 46, 1254-1257.	0.7	16
57	Improvement of Pt/ZrO ₂ by CeO ₂ for high pressure CH ₄ /CO ₂ reforming. Catalysis Letters, 2005, 99, 97-100.	1.4	15
58	Oxidation of isobutane over complex oxides containing V, Nb, Ta, and Mo under aerobic and anaerobic reaction conditions. Applied Catalysis A: General, 2005, 283, 209-216.	2.2	14
59	Synthesis and characterization of a series of mesoporous nanocrystalline lanthanides phosphate. Journal of Porous Materials, 2006, 13, 237-244.	1.3	14
60	Oxidative Reforming of <i>n</i> -Butane Triggered by Spontaneous Oxidation of CeO ₂ at Ambient Temperature. Chemistry of Materials, 2008, 20, 4176-4178.	3.2	14
61	Coreduction methodology for immiscible alloys of CuRu solid-solution nanoparticles with high thermal stability and versatile exhaust purification ability. Chemical Science, 2020, 11, 11413-11418.	3.7	13
62	Electronic Structure Evolution with Composition Alteration of Rh _x Cu _y Alloy Nanoparticles. Scientific Reports, 2017, 7, 41264.	1.6	12
63	Pt-Co Alloy Nanoparticles on a γ -Al ₂ O ₃ Support: Synergistic Effect between Isolated Electron-Rich Pt and Co for Automotive Exhaust Purification. ChemPlusChem, 2019, 84, 447-456.	1.3	12
64	Promotion mechanism of co-existing NaCl in the synthesis of CaCO ₃ . Materials Letters, 2007, 61, 3083-3085.	1.3	11
65	A CO Adsorption Site Change Induced by Copper Substitution in a Ruthenium Catalyst for Enhanced CO Oxidation Activity. Angewandte Chemie, 2019, 131, 2252-2257.	1.6	11
66	Oxidation of Ru/Ce _{0.5} Zr _{0.5} O ₂ at Ambient Temperature as a Trigger for Carbon-Free H ₂ Production by Ammonia Oxidative Decomposition. ACS Sustainable Chemistry and Engineering, 2020, 8, 13369-13376.	3.2	11
67	Effect of Calcination and Reduction Temperatures on the Catalytic Activity of Ru/La _{0.5} Ce _{0.5} O _{1.75} for Ammonia Synthesis under Mild Conditions. Energy Technology, 2020, 8, 2000264.	1.8	11
68	Pr ₂ O ₃ Supported Nano-layered Ruthenium Catalyzed Acceptorless Dehydrogenative Synthesis of 2-Substituted Quinolines and 1,8-Naphthyridines from 2-Aminoaryl Alcohols and Ketones. ChemCatChem, 2020, 12, 2198-2202.	1.8	11
69	Chemoselective hydrogenation of heteroarenes and arenes by Pd-Ru-PVP under mild conditions. RSC Advances, 2020, 10, 44191-44195.	1.7	11
70	Mechanism of Carbon Deposit/Removal in Methane Dry Reforming on Supported Metal Catalysts. Studies in Surface Science and Catalysis, 2001, 136, 129-134.	1.5	10
71	Direct high-purity hydrogen production from ammonia by using a membrane reactor combining V-10mol%Fe hydrogen permeable alloy membrane with Ru/Cs ₂ O/Pr ₆ O ₁₁ ammonia decomposition catalyst. International Journal of Hydrogen Energy, 2022, 47, 8372-8381.	3.8	10
72	Effect of Additives on the Stability of Pd/Al ₂ O ₃ for Carbon Dioxide Reforming of Methane. Bulletin of the Chemical Society of Japan, 2001, 74, 1841-1846.	2.0	9

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73	Novel tough catalyst supports for reactions involving HF. Applied Catalysis A: General, 2005, 283, 47-52.	2.2	9
74	Synthesis and characterization of molybdenum incorporated mesoporous aluminophosphate. Applied Surface Science, 2006, 252, 6260-6268.	3.1	9
75	Oxidative reforming of n-C ₄ H ₁₀ triggered at ambient temperature over reduced Ni/CeO ₂ . Catalysis Communications, 2009, 10, 1478-1481.	1.6	9
76	Co/TiO ₂ catalyst for high pressure dry reforming of methane and its modification by other metals. Studies in Surface Science and Catalysis, 2004, 147, 187-192.	1.5	8
77	Ni/(Rare Earth Phosphate) as a New Effective Catalyst for Autothermal Reforming of Methane. Chemistry Letters, 2006, 35, 580-581.	0.7	8
78	Preparation of mesoporous nanocrystalline cerium phosphate with controllable pore size by using chelating agent. Materials Chemistry and Physics, 2006, 97, 494-500.	2.0	8
79	Anaerobic oxidation of isobutane: Catalytic properties of MgV ₂ O ₆ and Mg ₂ V ₂ O ₇ prepared by the molten method. Journal of Molecular Catalysis A, 2008, 280, 164-172.	4.8	8
80	Cr ³⁺ –Co _{0.054} Ni _{0.018} Mg _{0.93} O Solid-Solution Catalysts for High-Pressure Syngas Production: Effect of Chromium on the Reduction and Catalysis. ACS Catalysis, 2013, 3, 1564-1572.	5.5	8
81	Anaerobic oxidation of isobutane. Journal of Molecular Catalysis A, 2006, 248, 61-69.	4.8	7
82	Oxidation of Rh/Ce _{0.5} Zr _{0.5} O ₂ Reduced under Mild Conditions as an Initiator of n-Butane Oxidative Reforming at Ambient Temperature. ChemSusChem, 2009, 2, 1032-1035.	3.6	7
83	Mono-atomically dispersed Pd on TiO ₂ as a catalyst for epoxidation of light olefins at low temperatures in the presence of H ₂ and O ₂ . Catalysis Communications, 2011, 12, 1396-1400.	1.6	7
84	Monoatomically dispersed Pd/TiO ₂ catalyst effective for epoxidation of propylene at ambient temperature in the presence of H ₂ and O ₂ . Journal of Molecular Catalysis A, 2012, 358, 89-98.	4.8	7
85	Effect of the Nature of the CeO ₂ Support of the Rh Catalyst on Triggering the Oxidative Reforming of n-Butane for H ₂ Production from Ambient Temperature. ChemCatChem, 2014, 6, 784-789.	1.8	7
86	Nitrile hydrogenation to secondary amines under ambient conditions over palladium–platinum random alloy nanoparticles. Catalysis Science and Technology, 2022, 12, 4128-4137.	2.1	7
87	Innovative technique for correction of the congenital lop ear. Journal of Plastic, Reconstructive and Aesthetic Surgery, 2006, 59, 494-498.	0.5	6
88	Catalytic behavior of Ni/Zr _x Ti _{1-x} O ₂ and the effect of SiO ₂ doping in oxidative steam reforming of n-butane. International Journal of Hydrogen Energy, 2009, 34, 8046-8052.	3.8	6
89	Preparation of Noble-metal Nanoparticles by Microwave-assisted Chemical Reduction and Evaluation as Catalysts for Nitrile Hydrogenation under Ambient Conditions. Journal of the Japan Petroleum Institute, 2019, 62, 220-227.	0.4	6
90	Active site generation by water for the activation of methane over non-reducible oxide catalysts: A study of MgO system. Studies in Surface Science and Catalysis, 1998, , 283-288.	1.5	5

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91	Decomposition of Chlorobenzene over Phosphate and Sulfate Catalysts Properties. Bulletin of the Chemical Society of Japan, 2006, 79, 145-148.	2.0	5
92	Synthesis of Mesoporous, Nanocrystalline Lanthanum Phosphate in the Presence of Citric Acid and Stearic Acid. Journal of Rare Earths, 2007, 25, 684-691.	2.5	5
93	Photocatalytic chemoselective cleavage of C=O bonds under hydrogen gas- and acid-free conditions. Chemical Communications, 2018, 54, 7298-7301.	2.2	5
94	Operando Spectroscopic Study of the Dynamics of Ru Catalyst during Preferential Oxidation of CO and the Prevention of Ammonia Poisoning by Pt. JACS Au, 0, , .	3.6	5
95	Redox properties of CeO ₂ and Pt-Rh/CeO ₂ studied by TAP method. Catalysis Letters, 2006, 111, 169-171.	1.4	4
96	Synthesis of Ni ₃ C Nano-whisker from NiSO ₄ and Sucrose by Means of Spray Pyrolysis. Chemistry Letters, 2007, 36, 512-513.	0.7	4
97	Anaerobic oxidation of isobutane. Applied Catalysis A: General, 2008, 345, 65-72.	2.2	4
98	A novel nanotube of composite of calcium carbonate and calcium sulfate. Materials Letters, 2009, 63, 322-324.	1.3	4
99	Combined theoretical and experimental studies of CO oxidation on PdRu nanoalloys. Applied Catalysis A: General, 2018, 568, 176-182.	2.2	4
100	One-pot synthesis of cyclohexylamine and N-aryl pyrroles via hydrogenation of nitroarenes over the Pd _{0.5} Ru _{0.5} -PVP catalyst. New Journal of Chemistry, 2021, 45, 9743-9746.	1.4	4
101	Synthesis of a thermally stable mesoporous aluminophosphate by using sodium aluminate as precursor. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 268, 40-44.	2.3	3
102	Addition of Al ₂ O ₃ or Cr ₂ O ₃ Promotes Metal Reduction in a Co-Ni-MgO Solid Solution Catalyst for CH ₄ /H ₂ O Reforming. Chemistry Letters, 2008, 37, 982-983.	0.7	3
103	Initiation of Oxidative Reforming of Butane over Praseodymium Oxide Supported Ni Catalysts at Ambient Temperature. Journal of the Japan Petroleum Institute, 2009, 52, 295-296.	0.4	3
104	Co Nanoparticle Catalysts Encapsulated by BaLa ₂ O ₃ Nanofractions for Efficient Ammonia Synthesis Under Mild Reaction Conditions. ACS Omega, 2022, 7, 24452-24460.	1.6	3
105	Oxidative Steam Reforming of Ethanol over Supported Ni Catalysts at Relatively Low Temperature. Journal of the Japan Petroleum Institute, 2011, 54, 331-337.	0.4	2
106	Formation of Single Crystal of Hofmann Clathrate, Ni(NH ₃) ₂ Ni(CN) ₄ ·0.5H ₂ O, at Higher Temperature by Means of Spray Pyrolysis of Sucrose and Nickel Nitrate. Chemistry Letters, 2007, 36, 756-757.	0.7	1
107	Inhibition of Ammonia Poisoning by Addition of Platinum to RuAl ₂ O ₃ for Preferential CO Oxidation in Fuel Cells. ChemSusChem, 2014, 7, 3264-3267.	3.6	1
108	Rh-PVP Catalyzed Reductive Amination of Phenols by Ammonia or Amines to Cyclohexylamines under Solvent-free Conditions. Chemistry Letters, 2022, 51, 81-84.	0.7	1

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109	The Effect of Ru Precursor and Support on the Hydrogenation of Aromatic Aldehydes/Ketones to Alcohols. ChemCatChem, 2022, 14, .	1.8	1
110	Development of Efficient Cold-start Process for Oxidative Reforming of <i>n</i> -Butane for Fuel Cell Applications. Journal of the Japan Petroleum Institute, 2015, 58, 274-284.	0.4	0
111	B21-P-01STEM study of bimetallic Pd-Ru nanoparticles. Microscopy (Oxford, England), 2015, 64, i97.2-i97.	0.7	0
112	Mechanism of Promotion Effects of Ce added to AlPO4 Effective for CFC Decomposition. Kagaku Kogaku Ronbunshu, 2009, 35, 623-632.	0.1	0