Tetsuhiko Kobayashi

List of Publications by Year
in descending order

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126	15,801	41344	18130
papers	citations	49 h-index	120 g-index

132	132	132	12325
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Gold catalysts prepared by coprecipitation for low-temperature oxidation of hydrogen and of carbon monoxide. Journal of Catalysis, 1989, 115, 301-309.	6.2	3,040
2	Novel Gold Catalysts for the Oxidation of Carbon Monoxide at a Temperature far Below 0 Â°C. Chemistry Letters, 1987, 16, 405-408.	1.3	2,872
3	Low-Temperature Oxidation of CO over Gold Supported on TiO2, Î±-Fe2O3, and Co3O4. Journal of Catalysis, 1993, 144, 175-192.	6.2	2,148
4	Polyaniline film-coated electrodes as electrochromic display devices. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1984, 161, 419-423.	0.1	648
5	Electrochemical reactions concerned with electrochromism of polyaniline film-coated electrodes. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1984, 177, 281-291.	0.1	384
6	Oxidative degradation pathway of polyaniline film electrodes. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1984, 177, 293-297.	0.1	352
7	Structural Characterization of CeO2â^'TiO2and V2O5/CeO2â^'TiO2Catalysts by Raman and XPS Techniques. Journal of Physical Chemistry B, 2003, 107, 5162-5167.	2.6	323
8	A Platinumâ€Free Zeroâ€Carbonâ€Emission Easy Fuelling Direct Hydrazine Fuel Cell for Vehicles. Angewandte Chemie - International Edition, 2007, 46, 8024-8027.	13.8	292
9	Potential application of anion-exchange membrane for hydrazine fuel cell electrolyte. Electrochemistry Communications, 2003, 5, 892-896.	4.7	245
10	Optical recognition of CO and H2 by use of gas-sensitive Auâ€“Co3O4 composite films. Journal of Materials Chemistry, 1997, 7, 1779-1783.	6.7	200
11	Low-temperature waterâ€“gas shift reaction over gold deposited on TiO2. Chemical Communications, 1997, , 271-272.	4.1	179
12	Structural Characterization of CeO2â^'MO2(M = Si4+, Ti4+, and Zr4+) Mixed Oxides by Raman Spectroscopy, X-ray Photoelectron Spectroscopy, and Other Techniques. Journal of Physical Chemistry B, 2003, 107, 11475-11484.	2.6	166
13	Influence of dry operating conditions: observation of oscillations and low temperature CO oxidation over Co3O4 and Au/Co3O4 catalysts. Catalysis Letters, 1994, 25, 257-264.	2.6	164
14	Role of Carbon Dioxide in the Dehydrogenation of Ethane over Gallium-Loaded Catalysts. Journal of Catalysis, 2001, 203, 87-93.	6.2	159
15	Dehydrogenation of ethane over gallium oxide in the presence of carbon dioxide. Chemical Communications, 1998, , 1025-1026.	4.1	154
16	Raman and X-ray Photoelectron Spectroscopy Study of CeO2â^'ZrO2and V2O5/CeO2â^'ZrO2Catalysts. Langmuir, 2003, 19, 3025-3030.	3.5	153
17	Surface Characterization of CeO2/SiO2 and V2O5/CeO2/SiO2 Catalysts by Raman, XPS, and Other Techniques. Journal of Physical Chemistry B, 2002, 106, 10964-10972.	2.6	149
18	Two conversion maxima at 373 and 573K in the reduction of nitrogen monoxide with hydrogen over Pd/TiO2 catalyst. Catalysis Today, 1998, 45, 135-138.	4.4	144

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19	Investigation of PEM type direct hydrazine fuel cell. Journal of Power Sources, 2003, 115, 236-242.	7.8	137
20	Redox behavior of palladium at start-up in the Perovskite-type LaFePdOx automotive catalysts showing a self-regenerative function. Applied Catalysis B: Environmental, 2005, 57, 267-273.	20.2	131
21	Surface characterization of sulfate, molybdate, and tungstate promoted TiO2-ZrO2 solid acid catalysts by XPS and other techniques. Applied Catalysis A: General, 2002, 228, 269-278.	4.3	130
22	A selective CO sensor using Ti-doped Î±-Fe2O3 with coprecipitated ultrafine particles of gold. Sensors and Actuators, 1988, 13, 339-349.	1.7	120
23	Preparation of Highly Dispersed Gold on Titanium and Magnesium Oxide. Studies in Surface Science and Catalysis, 1991, , 695-704.	1.5	119
24	Surface Characterization of La2O3â^'TiO2and V2O5/La2O3â^'TiO2Catalysts. Journal of Physical Chemistry B, 2002, 106, 5695-5700.	2.6	119
25	Oxidative removal of co contained in hydrogen by using metal oxide catalysts. International Journal of Hydrogen Energy, 1999, 24, 355-358.	7.1	114
26	Effect of anode electrocatalyst for direct hydrazine fuel cell using proton exchange membrane. Journal of Power Sources, 2003, 122, 132-137.	7.8	102
27	Combined effects of small gold particles on the optical gas sensing by transition metal oxide films. Catalysis Today, 1997, 36, 135-141.	4.4	93
28	Title is missing!. Catalysis Letters, 2000, 64, 215-221.	2.6	88
29	Surface characterization and catalytic activity of sulfate-, molybdate- and tungstate-promoted Al2O3â€“ZrO2 solid acid catalysts. Journal of Molecular Catalysis A, 2005, 227, 81-89.	4.8	83
30	Photoinduced hydrogen production from an aqueous solution of ethylene glycol over ultrafine gold supported on TiO2. Journal of Photochemistry and Photobiology A: Chemistry, 1994, 77, 59-67.	3.9	81
31	Optical CO sensitivity of Auâ€“CuO composite film by use of the plasmon absorption change. Sensors and Actuators B: Chemical, 2003, 96, 589-595.	7.8	80
32	Thin films of supported gold catalysts for CO detection. Sensors and Actuators B: Chemical, 1990, 1, 222-225.	7.8	77
33	Partial oxidation of methane to synthesis gas over supported iridium catalysts. Applied Catalysis A: General, 1998, 169, 281-290.	4.3	74
34	A new fuel cell using aqueous ammonia-borane as the fuel. Journal of Power Sources, 2007, 168, 167-171.	7.8	69
35	Structural Characterization and Catalytic Activity of Nanosized Ceriaâ^'Terbia Solid Solutions. Journal of Physical Chemistry C, 2008, 112, 16393-16399.	3.1	69
36	Oxidation of methane to formaldehyde over FeSiO2 and Snî—¸W mixed oxides. Catalysis Today, 1996, 32, 171-175.	4.4	68

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37	The Role of Chemisorbed Oxygen on Diamond Surfaces for the Dehydrogenation of Ethane in the Presence of Carbon Dioxide. Journal of Physical Chemistry B, 2003, 107, 4048-4056.	2.6	66
38	Effect of support on the conversion of methane to synthesis gas over supported iridium catalysts. Catalysis Letters, 1998, 51, 163-167.	2.6	65
39	Metal oxide catalysts for DME steam reforming: Ga2O3 and Ga2O3â€“Al2O3 catalysts with and without copper. Applied Catalysis A: General, 2005, 286, 11-22.	4.3	65
40	Humidity-sensitive optical absorption of Co3O4 film. Sensors and Actuators B: Chemical, 1996, 32, 157-160.	7.8	63
41	Structural Characterization and Oxidative Dehydrogenation Activity of V2O5/CexZr1-xO2/SiO2Catalysts. Journal of Physical Chemistry B, 2006, 110, 9140-9147.	2.6	63
42	The roles of redox and acidâ€“base properties of silica-supported vanadia catalysts in the selective oxidation of ethane. Catalysis Today, 2004, 93-95, 163-171.	4.4	60
43	Transient Response of Catalyst Bed Temperature in the Pulsed Reaction of Partial Oxidation of Methane to Synthesis Gas over Supported Rhodium and Iridium Catalysts. Journal of Catalysis, 1999, 186, 405-413.	6.2	59
44	Selective Oxidation of Ethane to Acetaldehyde and Acrolein over Silica-Supported Vanadium Catalysts Using Oxygen as Oxidant. Journal of Catalysis, 2000, 190, 215-227.	6.2	56
45	Î³-Al2â^'xMxO3Â±y (M = Ti4+ through Ga3+): potential pseudo-3D mesoporous materials with tunable acidity and electronic structure. Journal of Materials Chemistry, 2012, 22, 13484.	6.7	56
46	Odor identification using a SnO2-based sensor array. Sensors and Actuators B: Chemical, 2001, 80, 51-58.	7.8	54
47	Electrochromism in Iridium Oxide Films Prepared by Thermal Oxidation of Iridiumâ€Carbon Composite Films. Journal of the Electrochemical Society, 1987, 134, 570-575.	2.9	51
48	Catalysis of nanocrystalline mesoporous TiO2 on cyclohexene epoxidation with H2O2: Effects of mesoporosity and metal oxide additives. Journal of Molecular Catalysis A, 2005, 241, 23-32.	4.8	51
49	Direct Polymer Electrolyte Fuel Cells Using L-Ascorbic Acid as a Fuel. Electrochemical and Solid-State Letters, 2003, 6, A257.	2.2	50
50	Hydrogen production via steam reforming of ethyl alcohol over nano-structured indium oxide catalysts. Journal of Power Sources, 2008, 179, 566-570.	7.8	48
51	Effective surfaces of semiconductor catalysts for light-induced heterogeneous reactions evaluated by simultaneous photodeposition of both oxidation and reduction products. The Journal of Physical Chemistry, 1983, 87, 768-775.	2.9	47
52	Optical CO detection by use of CuO/Au composite films. Sensors and Actuators B: Chemical, 1995, 25, 851-853.	7.8	47
53	Partial oxidation of methane to synthesis gas over iridiumâ€“nickel bimetallic catalysts. Applied Catalysis A: General, 1999, 180, 183-193.	4.3	46
54	A Direct CO Polymer Electrolyte Membrane Fuel Cell. Angewandte Chemie - International Edition, 2006, 45, 3120-3122.	13.8	46

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55	Enhancement in the optical CO sensitivity of NiO film by the deposition of ultrafine gold particles. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 1011.	1.7	44
56	Thermal Stability and Dispersion Behavior of Nanostructured Ce_xZr_{1â^'x}O₂ Mixed Oxides over Anatase-TiO₂: A Combined Study of CO Oxidation and Characterization by XRD, XPS, TPR, HREM, and UVâ^'Vis DRS. Industrial & Engineering Chemistry Research, 2009, 48, 453-462.	3.7	43
57	Partial oxidation of methane over silica catalysts promoted by 3d transition metal ions. Journal of the Chemical Society Chemical Communications, 1994, , 1609.	2.0	39
58	The reducing capability of palladium segregated from perovskite-type LaFePdOx automotive catalysts. Applied Catalysis A: General, 2005, 296, 114-119.	4.3	39
59	A novel DME steam-reforming catalyst designed with fact database on-demand. Applied Surface Science, 2006, 252, 2593-2597.	6.1	38
60	Development of carbon monoxide detector using Au fine particles-doped Î±-Fe2O3. Sensors and Actuators B: Chemical, 1993, 14, 536-538.	7.8	37
61	Oxidized Diamond as a Simultaneous Production Medium of Carbon Nanomaterials and Hydrogen for Fuel Cell. Chemistry of Materials, 2003, 15, 4571-4575.	6.7	37
62	Transient response of catalyst bed temperature in the pulsed reaction of partial oxidation of methane to synthesis gas over supported group VIII metal catalysts. Catalysis Today, 2001, 64, 31-41.	4.4	35
63	Electrochemical oxidation of ammonia borane on gold electrode. International Journal of Hydrogen Energy, 2009, 34, 174-179.	7.1	35
64	Time evolution of palladium structure change with redox fluctuations in a LaFePdO3 perovskite automotive catalyst by high-speed analysis with in situ DXAFS. Catalysis Communications, 2008, 9, 311-314.	3.3	34
65	Electrochemical oxidation of CO in sulfuric acid solution over Pt and PtRu catalysts modified with TaOx and NbOx. Catalysis Today, 2003, 84, 223-229.	4.4	32
66	Rapid evaluation of oxidation catalysis by gas sensor system: total oxidation, oxidative dehydrogenation, and selective oxidation over metal oxide catalysts. Catalysis Today, 2001, 67, 379-387.	4.4	31
67	Selective oxidation of light alkanes to aldehydes over silica catalysts supporting mononuclear active sites â€" acrolein formation from ethane. Catalysis Today, 2001, 71, 69-76.	4.4	30
68	Oxidized Diamond: A Novel Support for Catalytic Dehydrogenation. Chemistry Letters, 2000, 29, 1100-1101.	1.3	29
69	Metal oxide catalysts for DME steam reforming: Ga2O3 and Ga2O3?Al2O3 catalysts. Catalysis Letters, 2005, 100, 247-253.	2.6	29
70	Effect of support on the activity of Ga2O3 species for steam reforming of dimethyl ether. Applied Catalysis A: General, 2006, 300, 58-66.	4.3	26
71	Role of Pt Overlayers on TiO2 Electrodes in Enhancement of the Rate of Cathodic Processes. Journal of the Electrochemical Society, 1983, 130, 1706-1711.	2.9	25
72	Direct Formation of Acetaldehyde from Ethane Using Carbon Dioxide as a Novel Oxidant over Oxidized Diamond-Supported Catalysts. Journal of Physical Chemistry B, 2003, 107, 13419-13424.	2.6	25

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73	Title is missing!. Catalysis Letters, 1998, 55, 33-38.	2.6	24
74	Title is missing!. Catalysis Letters, 2002, 80, 161-164.	2.6	24
75	Enhancing effect of gold deposition in the optical detection of reducing gases in air by metal oxide thin films. Sensors and Actuators B: Chemical, 1993, 14, 545-546.	7.8	23
76	Large optical CO sensitivity of NO2-pretreated Auî—¸NiO composite films. Sensors and Actuators B: Chemical, 1996, 36, 513-516.	7.8	23
77	Synthesis Gas Production from Methane Using Oxidized-Diamond-Supported Group VIII Metal Catalysts. Energy & Fuels, 2003, 17, 971-976.	5.1	22
78	Reaction of hydrogen with sodium oxide: A reversible hydrogenation/dehydrogenation system. Journal of Power Sources, 2006, 155, 167-171.	7.8	22
79	Oxidized Diamond Supported Ni Catalyst for Synthesis Gas Formation from Methane. Chemistry Letters, 2001, 30, 460-461.	1.3	20
80	High throughput experiments on methane partial oxidation using molecular oxygen over silica doped with various elements. Applied Catalysis A: General, 2003, 254, 45-58.	4.3	20
81	High-throughput screening of PEMFC anode catalysts by IR thermography. Applied Surface Science, 2004, 223, 220-223.	6.1	19
82	Graphite intercalation compounds as PEMFC electrocatalyst supports. Carbon, 2005, 43, 2374-2378.	10.3	19
83	A combinatorial study on catalytic synergism in supported metal catalysts for fuel cell technology. Applied Surface Science, 2004, 223, 102-108.	6.1	18
84	C2F6 plasma treatment of a carbon support for a PEM fuel cell electrocatalyst. Journal of Power Sources, 2006, 161, 836-838.	7.8	18
85	Effects of alkali metal cations on the structures, physico-chemical properties and catalytic behaviors of silica-supported vanadium oxide catalysts for the selective oxidation of ethane and the complete oxidation of diesel soot. Topics in Catalysis, 2006, 38, 309-325.	2.8	18
86	Effects of illumination intensity and solution pH on the competitive oxidation of halide ions and water at an illuminated TiO2 electrode. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1981, 122, 133-145.	0.1	17
87	Optical humidity sensitivity of plasma-oxidized nickel oxide films. Solid State Ionics, 1999, 121, 307-311.	2.7	16
88	Acrolein formation in the oxidation of ethane over silica catalysts supporting iron and cesium. Catalysis Letters, 1999, 63, 79-82.	2.6	16
89	Optimization of reaction conditions for cyclohexene epoxidation with H2O2 over nanocrystalline mesoporous TiO2 loaded with RuO2. Journal of Molecular Catalysis A, 2006, 248, 226-232.	4.8	15
90	Formation of Oxygenates in the Propane Oxidation over K+Modified Fe/SiO2Catalyst. Chemistry Letters, 1998, 27, 327-328.	1.3	14

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91	Oxidation of alkanes by TBHP in the presence of soluble titanium complexes. Journal of Molecular Catalysis A, 1999, 142, 77-84.	4.8	14
92	Dispersion Control of Nano-Particles and the Effect of the Coating Condition on the Performance of Proton-Exchange Membrane Fuel Cells (PEMFCs). Journal of Chemical Engineering of Japan, 2004, 37, 31-39.	0.6	14
93	Utilization of Combinatorial Method and High Throughput Experimentation for Development of Heterogeneous Catalysts. Journal of the Japan Petroleum Institute, 2006, 49, 157-167.	0.6	14
94	Oxidation of ethane into acetaldehyde and acrolein over silica containing cesium and a very small amount of additives. Applied Catalysis A: General, 2000, 196, 37-42.	4.3	13
95	Partial oxidation of ethane into acetaldehyde and acrolein by oxygen over silica-supported bismuth catalysts. Applied Catalysis A: General, 2001, 207, 139-149.	4.3	13
96	The role of surface flaws in competitive photoanodic processes at TiO2 electrodes. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1982, 138, 105-119.	0.1	12
97	Optimization of Fe/SiO2 based metal oxides as selective oxidation catalyst of propane with combinatorial approach. Research on Chemical Intermediates, 2002, 28, 397-407.	2.7	12
98	Novel Selective Oxidation of Light Alkanes Using Carbon Dioxide. Oxidized Diamond as a Novel Catalytic Medium. Chemistry Letters, 2003, 32, 866-867.	1.3	12
99	Influence of the reactivity of reducing agents on anodic photocurrents at TiO2 electrodes. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1981, 124, 179-188.	0.1	11
100	Formation of methanol by the gas phase partial oxidation of methane under normal pressures. Journal of the Chemical Society Chemical Communications, 1995, , 93.	2.0	11
101	Novel catalysts having NOx-adsorption sites for the selective oxidation of ethane. Applied Catalysis A: General, 2001, 209, 391-399.	4.3	11
102	XAFS studies of ultra-fine gold catalysts supported on hematite prepared from coprecipitated precursors. Physica B: Condensed Matter, 1989, 158, 183-184.	2.7	10
103	Simple Preparation Method of Isolated Iron (III) Species on Silica Surface. Chemistry Letters, 2003, 32, 208-209.	1.3	10
104	Partial Oxidation of Methane to Synthesis Gas with Iridium-loaded Titania Catalyst. Chemistry Letters, 1996, 25, 1029-1030.	1.3	9
105	A semiconductor gas sensor system for high throughput screening of heterogeneous catalysts for the production of benzene derivatives. Measurement Science and Technology, 2005, 16, 229-234.	2.6	9
106	Partial oxidation of propene over metal oxide catalysts pretreated with NO2. Catalysis Letters, 1998, 53, 73-76.	2.6	8
107	EFFECT OF ILLUMINATION INTENSITY ON STABILIZATION OF ZnO PHOTOANODES IN HALIDE SOLUTIONS. Chemistry Letters, 1979, 8, 457-460.	1.3	7
108	Photoelectrochemical properties of Srî—¸Feî—¸Nb oxides having perovskite structure. Electrochimica Acta, 1982, 27, 1129-1133.	5.2	7

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109	Instruments for preparation of heterogeneous catalysts by an impregnation method. Review of Scientific Instruments, 2005, 76, 062226.	1.3	7
110	ã,»ãƒ³ã,·ãƒ³ã,°æœ—™ã•ã‰ã‚‹ãƒŠãƒŽã,µã,ºåŠ¹æžœ. Electrochemistry, 2001, 69, 872-875.	1.4	6
111	Two Reaction Paths at Different Temperatures in the Reduction of Nitrogen Monoxide with Hydrogen over Supported Palladium Catalysts. Chemistry Letters, 1998, 27, 595-596.	1.3	5
112	Influence of dissolved oxygen on intensity modulated photocurrent spectroscopy (IMPS) at a siliconâ€“hydrofluoric acid interface. Electrochimica Acta, 2000, 45, 2219-2225.	5.2	5
113	Effect of UV light irradiation on the morphology of pyrolyzed Co3O4 films. Solid State Ionics, 2000, 136-137, 1291-1293.	2.7	5
114	Existence of the Naâ^'HÎ´-Â·Â·Â·HÎ´â€˜+â^'O Dihydrogen Bond in the Hydrogenation Process by Na2O:â€‰ A First-Principles Identification. Journal of Physical Chemistry C, 2007, 111, 5064-5068.	3.1	5
115	High-Throughput Screening of Oxidation Catalysts with Gas Sensors. , 2003, , 247-259.		3
116	Effect of the Composition and Coating Condition on the Structure and Performance of Catalyst Layer of PEFC. Journal of Chemical Engineering of Japan, 2007, 40, 808-816.	0.6	2
117	Dehydrogenation Reaction for Naï£¿Oï£¿H System: A Firstâ€Principles Study. ChemPhysChem, 2007, 8, 1979-1987.	2.1	2
118	Factors Governing the Competition in Electrochemical Reactions at Illuminated Semiconductors. ACS Symposium Series, 1981, , 131-143.	0.5	1
119	Graphite intercalation compounds used for electrocatalyst support. Tanso, 2005, 2005, 155-158.	0.1	1
120	56 High throughput experiment on the investigation of oxidation catalysts with gas sensor system. Studies in Surface Science and Catalysis, 2003, 145, 275-278.	1.5	0
121	Novel Selective Oxidation of Light Alkanes Using Carbon Dioxide. Oxidized Diamond as a Novel Catalytic Medium.. ChemInform, 2004, 35, no.	0.0	0
122	Oxidized Diamond as a Simultaneous Production Medium of Carbon Nanomaterials and Hydrogen for Fuel Cell.. ChemInform, 2004, 35, no.	0.0	0
123	Combinatorial Catalysis for Hydrogen Production from Ethanol. Materials Research Society Symposia Proceedings, 2005, 894, 1.	0.1	0
124	Gas Sensor Technology for High-Throughput Screening in Catalysis. , 2005, , 189-209.		0
125	Energy Research in AIST. Advanced Energy Materials, 2019, 9, 1901510.	19.5	0
126	Effects of illumination intensity and solution pH on the competitive oxidation of halide ions and water at an illuminated TiO2 electrode. Journal of Electroanalytical Chemistry (1959), 1981, 122, 133-145.	0.1	0