Junichiro Otomo

List of Publications by Year
in descending order

58 papers	1,349 citations	430754 18 h-index	345118 36 g-index
58 all docs	58 docs citations	58 times ranked	1286 citing authors

#	Article	IF	Citations
1	Chemical kinetic modeling of ammonia oxidation with improved reaction mechanism for ammonia/air and ammonia/hydrogen/air combustion. International Journal of Hydrogen Energy, 2018, 43, 3004-3014.	3.8	317
2	Protonic conduction of CsH2PO4 and its composite with silica in dry and humid atmospheres. Solid State Ionics, 2003, 156, 357-369.	1.3	196
3	Effect of water vapor on proton conduction of cesium dihydrogen phosphateand application to intermediate temperature fuel cells. Journal of Applied Electrochemistry, 2005, 35, 865-870.	1.5	48
4	Preparation and characterization of proton-conducting CsHSO4â€“SiO2 nanocomposite electrolyte membranes. Solid State Ionics, 2005, 176, 755-760.	1.3	47
5	Iron oxide redox reaction with oxide ion conducting supports for hydrogen production and storage systems. Chemical Engineering Science, 2015, 123, 380-387.	1.9	47
6	Electro-oxidation of methanol and ethanol on carbon-supported Pt catalyst at intermediate temperature. Journal of Electroanalytical Chemistry, 2008, 615, 84-90.	1.9	39
7	Improvements in reaction kinetics and stability of ilmenite as oxygen carrier by surface modification with calcium titanate in redox cycles of chemical-looping systems. Chemical Engineering Journal, 2017, 327, 257-267.	6.6	38
8	Electrochemical Acceleration of Ammonia Synthesis on Fe-Based Alkali-Promoted Electrocatalyst with Proton Conducting Solid Electrolyte. ACS Sustainable Chemistry and Engineering, 2017, 5, 10439-10446.	3.2	37
9	In situ formation of Ru nanoparticles on La1âˆ'x Sr x TiO3-based mixed conducting electrodes and their application in electrochemical synthesis of ammonia using a proton-conducting solid electrolyte. Journal of Materials Science, 2017, 52, 2825-2835.	1.7	34
10	Hydrogen production by catalytic near-critical water gasification and steam reforming of glucose. International Journal of Hydrogen Energy, 2010, 35, 3406-3414.	3.8	33
11	Protonic Conduction and Impedance Analysis in CsHSO[sub 4]/SiO[sub 2] Composite Systems. Journal of the Electrochemical Society, 2004, 151, J76.	1.3	32
12	Phase transition and proton transport characteristics in CsH2PO4/SiO2 composites. Electrochimica Acta, 2008, 53, 8186-8195.	2.6	32
13	Evaluation of Microstructural Changes and Performance Degradation in Iron-Based Oxygen Carriers during Redox Cycling for Chemical Looping Systems with Image Analysis. Industrial & Engineering Chemistry Research, 2018, 57, 5529-5538.	1.8	32
14	Evaluation of cost reduction potential for 1ÂkW class SOFC stack production: Implications for SOFC technology scenario. International Journal of Hydrogen Energy, 2013, 38, 14337-14347.	3.8	29
15	Thermodynamic evaluation of an ammonia-fueled combined-cycle gas turbine process operated under fuel-rich conditions. Energy, 2020, 194, 116894.	4.5	29
16	Glycerol electro-oxidation on a carbon-supported platinum catalyst at intermediate temperatures. Journal of Power Sources, 2013, 225, 141-149.	4.0	28
17	Electrochemical Ammonia Synthesis Using Mixed Protonic-Electronic Conducting Cathodes with Exsolved Ru-Nanoparticles in Proton Conducting Electrolysis Cells. Journal of the Electrochemical Society, 2017, 164, F1323-F1330.	1.3	26
18	Techno-economic evaluation of BECCS via chemical looping combustion of Japanese woody biomass. International Journal of Greenhouse Gas Control, 2019, 83, 69-82.	2.3	22

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19	Interactions of supported nickel and nickel oxide catalysts with methane and steam at high temperatures. Chemical Engineering Science, 2011, 66, 4196-4202.	1.9	20
20	CO production from CO2 and H2 via the rWGS reaction by thermochemical redox cycling in interconnected fluidized beds. Journal of CO2 Utilization, 2020, 40, 101191.	3.3	18
21	Nickel oxide redox processes with oxide ion conductor-supported nickel oxide in dry and humidified methane: Effect of oxide ion conductors on induction period in nickel oxide reduction and subsequent hydrogen production. Fuel, 2013, 104, 691-697.	3.4	16
22	Suppression of Leakage Current in Proton-Conducting BaZr_{0.8}Y_{0.2}O_{3â^Î´} Electrolyte by Forming Hole-Blocking Layer. Journal of the Electrochemical Society, 2020, 167, 084515.	1.3	16
23	AC-impedance spectroscopy of anodic reactions with adsorbed intermediates: electro-oxidations of 2-propanol and methanol on carbon-supported Pt catalyst. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 2004, 573, 99-109.	0.3	15
24	Acceleration of Ethanol Electro-Oxidation on a Carbon-Supported Platinum Catalyst at Intermediate Temperatures. Journal of the Electrochemical Society, 2011, 158, B369.	1.3	15
25	Coupled analysis of performance and costs of segmented-in-series tubular solid oxide fuel cell for combined cycle system. International Journal of Hydrogen Energy, 2017, 42, 19190-19203.	3.8	14
26	Reactivity improvement of ilmenite by calcium nitrate melt infiltration for Chemical Looping Combustion of biomass. Carbon Resources Conversion, 2019, 2, 51-58.	3.2	13
27	Electrochemical performance for the electro-oxidation of ethylene glycol on a carbon-supported platinum catalyst at intermediate temperature. Electrochimica Acta, 2011, 56, 10093-10100.	2.6	11
28	Influence of La/W ratio on electrical conductivity of lanthanum tungstate with high La/W ratio. Journal of Solid State Chemistry, 2017, 248, 1-8.	1.4	11
29	CO2 activation by methane in a dual-bed configuration via methane cracking and iron oxide lattice oxygen transport â€“ Concept and materials development. Chemical Engineering Journal, 2018, 349, 249-259.	6.6	11
30	Production of hydrogen by steam gasification of dehydrochlorinated poly(vinyl chloride) or activated carbon in the presence of various alkali compounds. Journal of Material Cycles and Waste Management, 2006, 8, 109-115.	1.6	9
31	The effects of minor elements in La0.6Sr0.4Co0.2Fe0.8O3-Î´ cathodes on oxygen reduction reaction. Journal of Power Sources, 2015, 277, 44-51.	4.0	9
32	Redox Reaction Kinetics of Fe₂O₃ by Hydrogen and Water with Oxide Ion Conducting Supports and Oxygen Transport Modeling for Fe₂O₃ Reduction Process. Journal of Chemical Engineering of Japan, 2016, 49, 243-250.	0.3	9
33	Structural and transport properties of lanthanum tungstate with high La/W ratio: Suitability for proton-conducting solid oxide fuel cells operating at intermediate temperature. Solid State Ionics, 2017, 306, 89-96.	1.3	9
34	Fabrication and electrochemical performance of anode-supported solid oxide fuel cells based on proton-conducting lanthanum tungstate thin electrolyte. Solid State Ionics, 2019, 337, 132-139.	1.3	9
35	Effective electrode design and the reaction mechanism for electrochemical promotion of ammonia synthesis using Fe-based electrode catalysts. Sustainable Energy and Fuels, 2021, 5, 188-198.	2.5	9
36	Optimization of lithium ion conductivity of Li2S-P2S5 glass ceramics by microstructural control of crystallization kinetics. Solid State Ionics, 2021, 362, 115583.	1.3	9

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37	Acceleration of Fe2O3 Reduction Kinetics by Wet Methane with Calcium Titanate as Support. Chemistry Letters, 2013, 42, 1438-1440.	0.7	8
38	Direct Alcohol Electro-oxidation in an Intermediate Temperature Fuel Cell. ECS Transactions, 2008, 16, 1275-1284.	0.3	7
39	Carbon-dioxide activation by methane with iron-doped barium zirconate in chemical looping cracking system. Chemical Engineering Journal, 2021, 417, 128012.	6.6	7
40	Multicriteria Assessment of the Performance of Solid Oxide Fuel Cells by Cell Design and Materials Development: Design and Modeling Approach. Journal of Fuel Cell Science and Technology, 2013, 10, .	0.8	5
41	Production Cost Structure and Cost Reduction Scenario of Woody Biomass in Japan. Journal of the Japanese Forest Society, 2017, 99, 187-194.	0.1	5
42	Fast proton transport in zinc phosphorous glass composites. Materials Chemistry and Physics, 2011, 127, 322-328.	2.0	4
43	Thermodynamic evaluation of open cycle gas turbines with carbon-free fuels H₂ and NH₃ at high temperatures. Journal of Thermal Science and Technology, 2019, 14, JTST0015-JTST0015.	0.6	4
44	Reaction Analysis of Ethanol Electro-Oxidation on PdRu/C Catalyst at Intermediate Temperature. Journal of Chemical Engineering of Japan, 2014, 47, 514-520.	0.3	3
45	Technological and Economic Assessment of Power Generating System with Woody Biomass in Terms of Constructing Cost Model and Technological Scenario. Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy, 2018, 97, 284-299.	0.2	3
46	Performance of Anode-Supported Proton-Conducting Solid Oxide Fuel Cells with Lanthanum-Based Thin Bilayer Electrolyte. ECS Transactions, 2019, 91, 1019-1028.	0.3	3
47	Kinetic and deuterium isotope analyses of ammonia electrochemical synthesis. RSC Advances, 2021, 11, 17891-17900.	1.7	3
48	Effect of lanthanum tungstate hole-blocking layer for improvement of energy efficiency in anode-supported protonic ceramic fuel cells. Journal of the Ceramic Society of Japan, 2021, 129, 147-153.	0.5	2
49	Ethanol Electro-Oxidation on a PtRu/C Catalyst at Intermediate Temperature: Reaction Kinetic Study on the Effect of Ru Addition. Kagaku Kogaku Ronbunshu, 2013, 39, 150-156.	0.1	2
50	Laminar Flow Characteristics in a Rectangular Microchannel. Kagaku Kogaku Ronbunshu, 2006, 32, 293-296.	0.1	2
51	MICROSTRUCTURE OBSERVATION AND ELECTRICAL CONDUCTIVITIES OF PROTON-CONDUCTING TiO2-P2O5 GLASS-CERAMIC SOLID ELECTROLYTES. Phosphorus Research Bulletin, 2013, 28, 24-29.	0.1	1
52	Proton conduction-assisted direct CO2 methanation using Ni/CaO/Y-doped BaZrO3 proton conductor. Fuel, 2022, 322, 124094.	3.4	1
53	Experimental analyses for electronic structure of barium zirconateâ€strontium zirconate protonâ€conducting solid solution. Journal of the American Ceramic Society, 2021, 104, 5740-5749.	1.9	0
54	Improvement of Energy Efficiency in Anode-Supported Proton Ceramic Fuel Cells By Lanthanum Tungstate Hole Blocking Layer. ECS Meeting Abstracts, 2020, MA2020-02, 2634-2634.	0.0	0

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55	Design and Performance of a Proton-Conducting Solid Oxide Reversible Cell. ECS Meeting Abstracts, 2020, MA2020-02, 2609-2609.	0.0	0
56	Comprehensive Evaluation of Manufacturing Costs and Environmental Impacts for Solid Oxide Electrolyzer Cell Systems. ECS Meeting Abstracts, 2020, MA2020-02, 2626-2626.	0.0	0
57	Roles of Interface and Surface of Electrode Catalysts in Ammonia Electrochemical Synthesis with Proton-Conducting Ceramic Fuel Cells. ECS Meeting Abstracts, 2020, MA2020-02, 2703-2703.	0.0	0
58	Materials and Systems Design for Energy Conversion with CO₂ Separation and Utilization Using Chemical-looping Technology. Journal of the Japan Petroleum Institute, 2022, 65, 1-10.	0.4	0