

# Junichiro Otomo

## List of Publications by Year in descending order

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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	Materials and Systems Design for Energy Conversion with CO <sub>2</sub> Separation and Utilization Using Chemical-looping Technology. Journal of the Japan Petroleum Institute, 2022, 65, 1-10.	0.4	0
2	Proton conduction-assisted direct CO <sub>2</sub> methanation using Ni/CaO/Y-doped BaZrO <sub>3</sub> proton conductor. Fuel, 2022, 322, 124094.	3.4	1
3	Carbon-dioxide activation by methane with iron-doped barium zirconate in chemical looping cracking system. Chemical Engineering Journal, 2021, 417, 128012.	6.6	7
4	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
5	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
6	Optimization of lithium ion conductivity of Li <sub>2</sub> S-P <sub>2</sub> S <sub>5</sub> glass ceramics by microstructural control of crystallization kinetics. Solid State Ionics, 2021, 362, 115583.	1.3	9
7	Experimental analyses for electronic structure of barium zirconate-strontium zirconate proton-conducting solid solution. Journal of the American Ceramic Society, 2021, 104, 5740-5749.	1.9	0
8	Kinetic and deuterium isotope analyses of ammonia electrochemical synthesis. RSC Advances, 2021, 11, 17891-17900.	1.7	3
9	Suppression of Leakage Current in Proton-Conducting BaZr <sub>0.8</sub> Y <sub>0.2</sub> O <sub>3-δ</sub> Electrolyte by Forming Hole-Blocking Layer. Journal of the Electrochemical Society, 2020, 167, 084515.	1.3	16
10	CO production from CO <sub>2</sub> and H <sub>2</sub> via the rWGS reaction by thermochemical redox cycling in interconnected fluidized beds. Journal of CO <sub>2</sub> Utilization, 2020, 40, 101191.	3.3	18
11	Thermodynamic evaluation of an ammonia-fueled combined-cycle gas turbine process operated under fuel-rich conditions. Energy, 2020, 194, 116894.	4.5	29
12	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
13	Design and Performance of a Proton-Conducting Solid Oxide Reversible Cell. ECS Meeting Abstracts, 2020, MA2020-02, 2609-2609.	0.0	0
14	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
15	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
16	Thermodynamic evaluation of open cycle gas turbines with carbon-free fuels H <sub>2</sub> and NH <sub>3</sub> at high temperatures. Journal of Thermal Science and Technology, 2019, 14, JTST0015-JTST0015.	0.6	4
17	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
18	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

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19	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
20	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
21	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
22	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
23	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
24	CO <sub>2</sub> activation by methane in a dual-bed configuration via methane cracking and iron oxide lattice oxygen transport – Concept and materials development. Chemical Engineering Journal, 2018, 349, 249-259.	6.6	11
25	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
26	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
27	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
28	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
29	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
30	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
31	In situ formation of Ru nanoparticles on La <sup>1-x</sup> Sr <sub>x</sub> TiO <sub>3</sub> -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
32	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
33	Redox Reaction Kinetics of Fe <sub>2</sub> O <sub>3</sub> by Hydrogen and Water with Oxide Ion Conducting Supports and Oxygen Transport Modeling for Fe <sub>2</sub> O <sub>3</sub> Reduction Process. Journal of Chemical Engineering of Japan, 2016, 49, 243-250.	0.3	9
34	The effects of minor elements in La <sub>0.6</sub> Sr <sub>0.4</sub> Co <sub>0.2</sub> Fe <sub>0.8</sub> O <sub>3-<math>\delta</math></sub> cathodes on oxygen reduction reaction. Journal of Power Sources, 2015, 277, 44-51.	4.0	9
35	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
36	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

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37	Multicriteria Assessment of the Performance of Solid Oxide Fuel Cells by Cell Design and Materials Development: Design and Modeling Approach. <i>Journal of Fuel Cell Science and Technology</i> , 2013, 10, .	0.8	5
38	Glycerol electro-oxidation on a carbon-supported platinum catalyst at intermediate temperatures. <i>Journal of Power Sources</i> , 2013, 225, 141-149.	4.0	28
39	Evaluation of cost reduction potential for 1ÅkW class SOFC stack production: Implications for SOFC technology scenario. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 14337-14347.	3.8	29
40	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. <i>Fuel</i> , 2013, 104, 691-697.	3.4	16
41	Acceleration of Fe <sub>2</sub> O <sub>3</sub> Reduction Kinetics by Wet Methane with Calcium Titanate as Support. <i>Chemistry Letters</i> , 2013, 42, 1438-1440.	0.7	8
42	Ethanol Electro-Oxidation on a PtRu/C Catalyst at Intermediate Temperature: Reaction Kinetic Study on the Effect of Ru Addition. <i>Kagaku Kogaku Ronbunshu</i> , 2013, 39, 150-156.	0.1	2
43	MICROSTRUCTURE OBSERVATION AND ELECTRICAL CONDUCTIVITIES OF PROTON-CONDUCTING TiO <sub>2</sub> -P <sub>2</sub> O <sub>5</sub> GLASS-CERAMIC SOLID ELECTROLYTES. <i>Phosphorus Research Bulletin</i> , 2013, 28, 24-29.	0.1	1
44	Acceleration of Ethanol Electro-Oxidation on a Carbon-Supported Platinum Catalyst at Intermediate Temperatures. <i>Journal of the Electrochemical Society</i> , 2011, 158, B369.	1.3	15
45	Fast proton transport in zinc phosphorous glass composites. <i>Materials Chemistry and Physics</i> , 2011, 127, 322-328.	2.0	4
46	Electrochemical performance for the electro-oxidation of ethylene glycol on a carbon-supported platinum catalyst at intermediate temperature. <i>Electrochimica Acta</i> , 2011, 56, 10093-10100.	2.6	11
47	Interactions of supported nickel and nickel oxide catalysts with methane and steam at high temperatures. <i>Chemical Engineering Science</i> , 2011, 66, 4196-4202.	1.9	20
48	Hydrogen production by catalytic near-critical water gasification and steam reforming of glucose. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 3406-3414.	3.8	33
49	Electro-oxidation of methanol and ethanol on carbon-supported Pt catalyst at intermediate temperature. <i>Journal of Electroanalytical Chemistry</i> , 2008, 615, 84-90.	1.9	39
50	Phase transition and proton transport characteristics in CsH <sub>2</sub> PO <sub>4</sub> /SiO <sub>2</sub> composites. <i>Electrochimica Acta</i> , 2008, 53, 8186-8195.	2.6	32
51	Direct Alcohol Electro-oxidation in an Intermediate Temperature Fuel Cell. <i>ECS Transactions</i> , 2008, 16, 1275-1284.	0.3	7
52	Production of hydrogen by steam gasification of dehydrochlorinated poly(vinyl chloride) or activated carbon in the presence of various alkali compounds. <i>Journal of Material Cycles and Waste Management</i> , 2006, 8, 109-115.	1.6	9
53	Laminar Flow Characteristics in a Rectangular Microchannel. <i>Kagaku Kogaku Ronbunshu</i> , 2006, 32, 293-296.	0.1	2
54	Preparation and characterization of proton-conducting CsHSO <sub>4</sub> •SiO <sub>2</sub> nanocomposite electrolyte membranes. <i>Solid State Ionics</i> , 2005, 176, 755-760.	1.3	47

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55	Effect of water vapor on proton conduction of cesium dihydrogen phosphate and application to intermediate temperature fuel cells. <i>Journal of Applied Electrochemistry</i> , 2005, 35, 865-870.	1.5	48
56	Protonic Conduction and Impedance Analysis in CsHSO <sub>4</sub> /SiO <sub>2</sub> Composite Systems. <i>Journal of the Electrochemical Society</i> , 2004, 151, J76.	1.3	32
57	AC-impedance spectroscopy of anodic reactions with adsorbed intermediates: electro-oxidations of 2-propanol and methanol on carbon-supported Pt catalyst. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 2004, 573, 99-109.	0.3	15
58	Protonic conduction of CsH <sub>2</sub> PO <sub>4</sub> and its composite with silica in dry and humid atmospheres. <i>Solid State Ionics</i> , 2003, 156, 357-369.	1.3	196