Ralf Peters

List of Publications by Year
in descending order

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113 papers	2,814 citations	172457 29 h-index	197818 49 g-index
119 all docs	119 docs citations	119 times ranked	1986 citing authors

#	Article	IF	Citations
1	Linking the Power and Transport Sectorsâ€”Part 1: The Principle of Sector Coupling. Energies, 2017, 10, 956.	3.1	141
2	Power-to-fuel as a key to sustainable transport systems â€“ An analysis of diesel fuels produced from CO 2 and renewable electricity. Fuel, 2017, 205, 198-221.	6.4	138
3	Internal reforming of methane in solid oxide fuel cell systems. Journal of Power Sources, 2002, 106, 238-244.	7.8	136
4	H2-based synthetic fuels: A techno-economic comparison of alcohol, ether and hydrocarbon production. International Journal of Hydrogen Energy, 2020, 45, 5395-5414.	7.1	109
5	Methanol steam reforming in a fuel cell drive system. Journal of Power Sources, 1999, 84, 187-193.	7.8	90
6	Compact methanol reformer test for fuel-cell powered light-duty vehicles. Journal of Power Sources, 1998, 71, 288-293.	7.8	88
7	Design and test of a 5 kW high-temperature polymer electrolyte fuel cell system operated with diesel and kerosene. Applied Energy, 2014, 114, 238-249.	10.1	87
8	Methanol as a renewable energy carrier: An assessment of production and transportation costs for selected global locations. Advances in Applied Energy, 2021, 3, 100050.	13.2	81
9	Small-scale testing of a precious metal catalyst in the autothermal reforming of various hydrocarbon feeds. Journal of Power Sources, 2002, 106, 231-237.	7.8	80
10	Autothermal reforming of commercial Jet A-1 on a 5kWe scale. International Journal of Hydrogen Energy, 2007, 32, 4847-4858.	7.1	72
11	Pre-reforming of natural gas in solid oxide fuel-cell systems. Journal of Power Sources, 2000, 86, 432-441.	7.8	68
12	How to reduce the greenhouse gas emissions and air pollution caused by light and heavy duty vehicles with battery-electric, fuel cell-electric and catenary trucks. Environment International, 2021, 152, 106474.	10.0	65
13	Investigation of a methanol reformer concept considering the particular impact of dynamics and long-term stability for use in a fuel-cell-powered passenger car. Journal of Power Sources, 2000, 86, 507-514.	7.8	62
14	A techno economic analysis of the power to gas route. Journal of CO2 Utilization, 2019, 34, 616-634.	6.8	61
15	Life cycle assessment of a small-scale methanol production system: A Power-to-Fuel strategy for biogas plants. Journal of Cleaner Production, 2020, 271, 122476.	9.3	58
16	Fuel cell drive system with hydrogen generation in test. Journal of Power Sources, 2000, 86, 228-236.	7.8	57
17	The separation of CO2 from ambient air â€“ A techno-economic assessment. Applied Energy, 2018, 218, 361-381.	10.1	56
18	Fuel cell systems with reforming of petroleum-based and synthetic-based diesel and kerosene fuels for APU applications. International Journal of Hydrogen Energy, 2015, 40, 6405-6421.	7.1	55

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19	Non-fossil CO2 recyclingâ€"The technical potential for the present and future utilization for fuels in Germany. Journal of CO2 Utilization, 2019, 30, 130-141.	6.8	52
20	A novel reactor type for autothermal reforming of diesel fuel and kerosene. Applied Energy, 2015, 150, 176-184.	10.1	51
21	Fuel Processing of Diesel and Kerosene for Auxiliary Power Unit Applications. Energy & Fuels, 2013, 27, 4386-4394.	5.1	50
22	Optimised Mixture Formation for Diesel Fuel Processing. Fuel Cells, 2008, 8, 129-137.	2.4	46
23	Methanol steam-reforming in a catalytic fixed bed reactor. Chemical Engineering and Technology, 1997, 20, 617-623.	1.5	45
24	Long-term stability at fuel processing of diesel and kerosene. International Journal of Hydrogen Energy, 2014, 39, 18027-18036.	7.1	38
25	Off-grid power-to-fuel systems for a market launch scenario â€" A techno-economic assessment. Applied Energy, 2019, 250, 1099-1109.	10.1	37
26	Test of a waterâ€"gas-shift reactor on a 3kWe-scaleâ€"design points for high- and low-temperature shift reaction. Journal of Power Sources, 2005, 152, 189-195.	7.8	35
27	A battery-fuel cell hybrid auxiliary power unit for trucks: Analysis of direct and indirect hybrid configurations. Energy Conversion and Management, 2016, 127, 312-323.	9.2	34
28	Promising catalytic synthesis pathways towards higher alcohols as suitable transport fuels based on H2 and CO2. Journal of CO2 Utilization, 2018, 27, 223-237.	6.8	33
29	Greener production of dimethyl carbonate by the Power-to-Fuel concept: a comparative techno-economic analysis. Green Chemistry, 2021, 23, 1734-1747.	9.0	31
30	Advances in autothermal reformer design. Applied Energy, 2017, 198, 88-98.	10.1	29
31	The impact of diesel vehicles on NOx and PM10 emissions from road transport in urban morphological zones: A case study in North Rhine-Westphalia, Germany. Science of the Total Environment, 2020, 727, 138583.	8.0	29
32	Evaluation of multifunctional fuel cell systems in aviation using a multistep process analysis methodology. Applied Energy, 2013, 111, 46-63.	10.1	28
33	A structured test reactor for the evaporation of methanol on the basis of a catalytic combustion. Catalysis Today, 2001, 69, 193-200.	4.4	26
34	Liquid phase desulfurization of jet fuel by a combined pervaporation and adsorption process. Fuel Processing Technology, 2009, 90, 458-464.	7.2	26
35	Combination of autothermal reforming with water-gas-shift reactionâ€"small-scale testing of different water-gas-shift catalysts. Journal of Power Sources, 2004, 126, 112-118.	7.8	25
36	Analysis and optimization of solid oxide fuel cell-based auxiliary power units using a generic zero-dimensional fuel cell model. Journal of Power Sources, 2011, 196, 9500-9509.	7.8	25

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37	HT-PEFC Systems Operating with Diesel and Kerosene for APU Application. Energy Procedia, 2012, 29, 541-551.	1.8	25
38	A diesel fuel processor for fuel-cell-based auxiliary power unit applications. Journal of Power Sources, 2017, 355, 44-52.	7.8	25
39	An Overview of Promising Alternative Fuels for Road, Rail, Air, and Inland Waterway Transport in Germany. Energies, 2022, 15, 1443.	3.1	25
40	Hydrogen Production via Autothermal Reforming of Diesel Fuel. Fuel Cells, 2004, 4, 225-230.	2.4	24
41	Heat exchanger design for autothermal reforming of diesel. International Journal of Hydrogen Energy, 2018, 43, 11830-11846.	7.1	24
42	Vapor-Liquid Equilibria in the System NH3 + H2O + LiBr. 2. Data Correlation. Journal of Chemical & Engineering Data, 1995, 40, 775-783.	1.9	23
43	Electrical start-up for diesel fuel processing in a fuel-cell-based auxiliary power unit. Journal of Power Sources, 2016, 302, 315-323.	7.8	23
44	Vapor-Liquid Equilibria in the System NH3 + H2O + LiBr. 1. Measurements at T = 303-423 K and p = 0.1-1.5 MPa. Journal of Chemical & Engineering Data, 1995, 40, 769-774.	1.9	22
45	Recent advances in diesel autothermal reformer design. International Journal of Hydrogen Energy, 2020, 45, 2279-2288.	7.1	22
46	Routes for deactivation of different autothermal reforming catalysts. Journal of Power Sources, 2016, 325, 51-63.	7.8	21
47	Elimination of by-products of autothermal diesel reforming. Chemical Engineering Journal, 2016, 306, 107-116.	12.7	20
48	An integrated diesel fuel processing system with thermal start-up for fuel cells. Applied Energy, 2018, 226, 145-159.	10.1	20
49	Optimization of adsorptive desulfurization process of jet fuels for application in fuel cell systems. Fuel Processing Technology, 2012, 95, 144-153.	7.2	19
50	Catalytic burner with internal steam generation for a fuel-cell-based auxiliary power unit for middle distillates. International Journal of Hydrogen Energy, 2014, 39, 4131-4142.	7.1	18
51	Operating strategies for fuel processing systems with a focus on waterâ€“gas shift reactor stability. Applied Energy, 2016, 164, 540-552.	10.1	18
52	An autothermal reforming system for diesel and jet fuel with quick start-up capability. International Journal of Hydrogen Energy, 2019, 44, 27749-27764.	7.1	17
53	Reforming of diesel and jet fuel for fuel cells on a systems level: Steady-state and transient operation. Applied Energy, 2020, 279, 115882.	10.1	15
54	Future Power Train Solutions for Long-Haul Trucks. Sustainability, 2021, 13, 2225.	3.2	14

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55	Hydrodesulfurization of jet fuel by pre-saturated one-liquid-flow technology for mobile fuel cell applications. Chemical Engineering Science, 2009, 64, 288-293.	3.8	13
56	Startâ€Up of HTâ€PEFC Systems Operating with Diesel and Kerosene for APU Applications. Fuel Cells, 2014, 14, 266-276.	2.4	13
57	A Techno-Economic Assessment of Fischerâ€"Tropsch Fuels Based on Syngas from Co-Electrolysis. Processes, 2022, 10, 699.	2.8	13
58	Operational experience with the fuel processing system for fuel cell drives. Journal of Power Sources, 2002, 106, 333-337.	7.8	12
59	Operational Experience from a 5 kWe HT-PEFC System with Reforming of Diesel and Kerosene. ECS Transactions, 2013, 58, 165-174.	0.5	12
60	Spray formation of middle distillates for autothermal reforming. International Journal of Hydrogen Energy, 2017, 42, 16946-16960.	7.1	11
61	Water-gas shift reactor for fuel cell systems: Stable operation for 5000Âhours. International Journal of Hydrogen Energy, 2018, 43, 19222-19230.	7.1	11
62	Ethanol Dehydrogenation: A Reaction Path Study by Means of Temporal Analysis of Products. Catalysts, 2020, 10, 1151.	3.5	11
63	Autothermal Reforming of Jet A-1 and Diesel: General Aspects and Experimental Results. ECS Transactions, 2008, 12, 589-600.	0.5	10
64	Deep desulfurization of petroleum streams: Novel technologies and approaches to construction of new plants and upgrading existing facilities. Chemical Engineering Journal, 2009, 154, 302-306.	12.7	10
65	Behavior of Metallic Components During 4,000â€‰h Operation of an SOFC Stack with Carbon Containing Fuel Gas. Fuel Cells, 2016, 16, 600-610.	2.4	10
66	Quantitative analysis of sub-ppm traces of hydrocarbons in the product gas from diesel reforming. International Journal of Hydrogen Energy, 2019, 44, 4020-4030.	7.1	10
67	Thermodynamic and ecological preselection of synthetic fuel intermediates from biogas at farm sites. Energy, Sustainability and Society, 2020, 10, .	3.8	10
68	Desulfurization of jet fuel by pervaporation. Journal of Membrane Science, 2012, 390-391, 12-22.	8.2	9
69	Desulfurization of Jet A-1 and Heating Oil: General Aspects and Experimental Results. ECS Transactions, 2008, 12, 543-554.	0.5	8
70	Solid-liquid equilibria in the systems NH3-H2O-LiBr and H2O-LiBr at p=1 atm in the range from ?35 to 80ï¿½C. International Journal of Thermophysics, 1993, 14, 763-775.	2.1	7
71	Enhancing the Efficiency of SOFCâ€Based Auxiliary Power Units by Intermediate Methanation. Fuel Cells, 2012, 12, 474-486.	2.4	7
72	Hydrodesulfurization process with pre-saturation using reformate for application in a 5kW fuel cell system. Fuel Processing Technology, 2014, 127, 59-65.	7.2	7

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73	Investigation of Operating Parameters in Conjunction with Catalyst Deactivation of the Water-Gas Shift Reactor in a Fuel Cell System. ECS Transactions, 2015, 65, 99-114.	0.5	7
74	Identification and thermodynamic analysis of reaction pathways of methylal and OME-n formation. Energy, 2017, 138, 1221-1246.	8.8	7
75	The biogas-oxyfuel process as a carbon source for power-to-fuel synthesis: Enhancing availability while reducing separation effort. Journal of CO2 Utilization, 2021, 45, 101410.	6.8	7
76	Large Auxiliary Power Units for Vessels and Airplanes. RSC Energy and Environment Series, 2010, , 76-148.	0.5	7
77	Startâ€Up and Loadâ€Change Behavior of a Catalytic Burner for a Fuelâ€Cellâ€Based APU for Diesel Fuel. Fuel Cells, 2015, 15, 15-26.	2.4	6
78	Property Data Estimation for Hemiformals, Methylene Glycols and Polyoxymethylene Dimethyl Ethers and Process Optimization in Formaldehyde Synthesis. Energies, 2020, 13, 3401.	3.1	6
79	Solvation model for VLE in the system H2O-LiBr from 5 to 76 wt%. Fluid Phase Equilibria, 1994, 94, 129-147.	2.5	5
80	Highly integrated catalytic burner with laser-additive manufactured manifolds. Reaction Chemistry and Engineering, 2017, 2, 437-445.	3.7	5
81	Performance and Stability of Solid Oxide Cell Stacks in CO₂-Electrolysis Mode. ECS Transactions, 2021, 103, 363-374.	0.5	5
82	The autothermal reforming of oxymethylenether from the power-to-fuel process. International Journal of Hydrogen Energy, 2021, 46, 31984-31994.	7.1	5
83	Start-up Behavior of Fuel Processing Systems. ECS Transactions, 2009, 17, 599-610.	0.5	4
84	Methodologies for Fuel Cell Process Engineering. , 2012, , 597-644.		4
85	Combined near-ambient pressure photoelectron spectroscopy and temporal analysis of products study of CH4 oxidation on Pd/Î³-Al2O3 catalysts. Catalysis Today, 2021, 360, 444-453.	4.4	4
86	Development of a 10/40kW-Class Reversible Solid Oxide Cell System at Forschungszentrum JÃ¼lich. ECS Transactions, 2021, 103, 289-297.	0.5	4
87	A Compact, Self-Sustaining Fuel Cell Auxiliary Power Unit Operated on Diesel Fuel. Energies, 2021, 14, 5909.	3.1	4
88	Modeling of Reversible Solid Oxide Cell Stacks with an Open-Source Library. ECS Transactions, 2021, 103, 569-580.	0.5	3
89	A solvation model for vapor-liquid equilibria in the system H2O-NaOH from 10 to 85 wt%. International Journal of Thermophysics, 1996, 17, 99-109.	2.1	2
90	Principles of Systems Engineering. , 2012, , 917-961.		2

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91	Computational Fluid Dynamic Simulation Using Supercomputer Calculation Capacity. , 2012, , 703-732.		2
92	An Onâ€Đemand Safety Gas Generator for Solid Oxide Fuel Cell and Electrolyzer Systems. Fuel Cells, 2017, 17, 882-889.	2.4	2
93	ALIGN-CCUS: Production of dimethyl ether from CO2 and its use as energy carrier - Results from the CCU demonstration plant. SSRN Electronic Journal, 0, , .	0.4	2
94	Experimental Investigation of Efficiency Maximization in Solid Oxide Electrolysis Systems by Internal Steam and Heat Recovery. ECS Transactions, 2021, 103, 555-560.	0.5	2
95	FUEL CELLS â€" SOLID OXIDE FUEL CELLS | Internal and External Reformation. , 2009, , 88-98.		1
96	CFD-unterstÃ¼tzte Optimierung des Startvorgangs eines Brenngaserzeugungspackages fÃ¼r die Bordstromversorgung. Chemie-Ingenieur-Technik, 2014, 86, 1440-1441.	0.8	1
97	Elucidating the Influence of the d-Band Center on the Synthesis of Isobutanol. Catalysts, 2021, 11, 406.	3.5	1
98	Performance and Stability of Solid Oxide Cell Stacks in CO2-Electrolysis Mode. ECS Meeting Abstracts, 2021, MA2021-03, 202-202.	0.0	1
99	Heutige und zukÃ¼nftige Kraftstoffe fÃ¼r Brennstoffzellen in der Luftfahrt. , 2015, , 7-100.		1
100	Scouting Study About the Use of Microreactors for Gas Supply in a PEM Fuel Cell System for Traction. , 1998, , 27-34.		1
101	Editorial: Fuel Cells 3/2004. Fuel Cells, 2004, 4, 130-130.	2.4	0
102	Properties of Nickel Mesh as a Methane Steam Reforming Catalyst and its Application in SOFCs. , 2006, , 187-192.		0
103	Operational Experience from a 5 kWe HT-PEFC System With Reforming of Diesel and Kerosene. ECS Meeting Abstracts, 2013, , .	0.0	0
104	Fuel cell — Battery hybrid systems for auxiliary power units. , 2014, , .		0
105	Dynamischer Betrieb von autothermen Reformern in Brennstoffzellensystemen fÃ¼r die Bordstromversorgung. Chemie-Ingenieur-Technik, 2014, 86, 1432-1433.	0.8	0
106	Prozessketten zur Bereitstellung von Kraftstoffen aus Kohlendioxid und Wasserstoff. Chemie-Ingenieur-Technik, 2016, 88, 1262-1262.	0.8	0
107	Hydrogen production from bio-fuels using precious metal catalysts. E3S Web of Conferences, 2017, 23, 03002.	0.5	0
108	An Investigation of the Redox Stability of an Anode-Supported SOFC Stack Using Acoustic Emission Monitoring. ECS Transactions, 2021, 103, 1395-1402.	0.5	0

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109	Development of a 10/40kW-Class Reversible Solid Oxide Cell System at Forschungszentrum JÃ¼lich. ECS Meeting Abstracts, 2021, MA2021-03, 195-195.	0.0	0
110	Experimental Investigation of Efficiency Maximization in Solid Oxide Electrolysis Systems by Internal Steam and Heat Recovery. ECS Meeting Abstracts, 2021, MA2021-03, 221-221.	0.0	0
111	An Investigation of the Redox Stability of an Anode-Supported SOFC Stack Using Acoustic Emission Monitoring. ECS Meeting Abstracts, 2021, MA2021-03, 60-60.	0.0	0
112	Modeling of Reversible Solid Oxide Cell Stacks with an Open-Source Library. ECS Meeting Abstracts, 2021, MA2021-03, 224-224.	0.0	0
113	Brennstoffzellensysteme als Bestandteil eines multifunktionalen Systems. , 2015, , 333-403.		0