# Detlef Stolten

## List of Publications by Citations

Source: https://exaly.com/author-pdf/3195517/detlef-stolten-publications-by-citations.pdf

Version: 2024-04-17

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

 346
 12,069
 53
 98

 papers
 citations
 h-index
 g-index

 358
 14,866
 5.9
 6.99

 ext. papers
 ext. citations
 avg, IF
 L-index

#	Paper	IF	Citations
346	A comprehensive review on PEM water electrolysis. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 4901-4934	6.7	2398
345	Power to gas: Technological overview, systems analysis and economic assessment for a case study in Germany. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 4285-4294	6.7	485
344	Closing the loop: captured CO2 as a feedstock in the chemical industry. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 3283-3297	35.4	269
343	Seasonal storage and alternative carriers: A flexible hydrogen supply chain model. <i>Applied Energy</i> , <b>2017</b> , 200, 290-302	10.7	231
342	A Review of Post-combustion CO2 Capture Technologies from Coal-fired Power Plants. <i>Energy Procedia</i> , <b>2017</b> , 114, 650-665	2.3	228
341	The investment costs of electrolysis IA comparison of cost studies from the past 30 years. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 1209-1223	6.7	202
340	A parametric study of CO2/N2 gas separation membrane processes for post-combustion capture. Journal of Membrane Science, <b>2008</b> , 325, 284-294	9.6	172
339	Pressurized PEM water electrolysis: Efficiency and gas crossover. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 14921-14933	6.7	159
338	Acidic or Alkaline? Towards a New Perspective on the Efficiency of Water Electrolysis. <i>Journal of the Electrochemical Society</i> , <b>2016</b> , 163, F3197-F3208	3.9	145
337	Multi-stage gas separation membrane processes used in post-combustion capture: Energetic and economic analyses. <i>Journal of Membrane Science</i> , <b>2010</b> , 359, 160-172	9.6	137
336	Internal reforming of methane in solid oxide fuel cell systems. <i>Journal of Power Sources</i> , <b>2002</b> , 106, 238	- <b>2</b> 54 <del>9</del> 1	121
335	Development of a compact 500 W class direct methanol fuel cell stack. <i>Journal of Power Sources</i> , <b>2002</b> , 106, 313-322	8.9	119
334	Impact of different time series aggregation methods on optimal energy system design. <i>Renewable Energy</i> , <b>2018</b> , 117, 474-487	8.1	114
333	Recent developments of the measurement of the methanol permeation in a direct methanol fuel cell. <i>Journal of Power Sources</i> , <b>2002</b> , 105, 274-282	8.9	112
332	An analysis of degradation phenomena in polymer electrolyte membrane water electrolysis. <i>Journal of Power Sources</i> , <b>2016</b> , 326, 120-128	8.9	111
331	Gas Permeation through Nafion. Part 1: Measurements. Journal of Physical Chemistry C, 2015, 119, 2514	15 <del>5.</del> 2851!	 5 <b>5</b> 05
330	Linking the Power and Transport Sectors <b>P</b> art 1: The Principle of Sector Coupling. <i>Energies</i> , <b>2017</b> , 10, 956	3.1	105

# (2017-2018)

329	A review of current challenges and trends in energy systems modeling. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 96, 156-166	16.2	103
328	Power-to-Steel: Reducing CO2 through the Integration of Renewable Energy and Hydrogen into the German Steel Industry. <i>Energies</i> , <b>2017</b> , 10, 451	3.1	103
327	Power-to-fuel as a key to sustainable transport systems [An analysis of diesel fuels produced from CO 2 and renewable electricity. <i>Fuel</i> , <b>2017</b> , 205, 198-221	7.1	97
326	Ten years of operational experience with a hydrogen-based renewable energy supply system. <i>Solar Energy</i> , <b>2003</b> , 75, 469-478	6.8	97
325	A review of high-temperature polymer electrolyte membrane fuel-cell (HT-PEMFC)-based auxiliary power units for diesel-powered road vehicles. <i>Journal of Power Sources</i> , <b>2016</b> , 311, 91-102	8.9	95
324	Technical potential of salt caverns for hydrogen storage in Europe. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 6793-6805	6.7	91
323	Spatio-temporal optimization of a future energy system for power-to-hydrogen applications in Germany. <i>Energy</i> , <b>2018</b> , 158, 1130-1149	7.9	87
322	Time series aggregation for energy system design: Modeling seasonal storage. <i>Applied Energy</i> , <b>2018</b> , 213, 123-135	10.7	86
321	A 3D CFD model for predicting the temperature distribution in a full scale APU SOFC short stack under transient operating conditions. <i>Applied Energy</i> , <b>2014</b> , 135, 539-547	10.7	79
320	Energiespeicherung als Element einer sicheren Energieversorgung. <i>Chemie-Ingenieur-Technik</i> , <b>2015</b> , 87, 17-89	0.8	78
319	Design and test of a 5 kWe high-temperature polymer electrolyte fuel cell system operated with diesel and kerosene. <i>Applied Energy</i> , <b>2014</b> , 114, 238-249	10.7	78
318	SOFC stack performance under high fuel utilization. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 1128-1136	6.7	77
317	Linking the Power and Transport SectorsPart 2: Modelling a Sector Coupling Scenario for Germany. <i>Energies</i> , <b>2017</b> , 10, 957	3.1	77
316	A parametric study of the impact of membrane materials and process operating conditions on carbon capture from humidified flue gas. <i>Journal of Membrane Science</i> , <b>2013</b> , 431, 139-155	9.6	77
315	Polymer electrolyte membrane water electrolysis: Restraining degradation in the presence of fluctuating power. <i>Journal of Power Sources</i> , <b>2017</b> , 342, 38-47	8.9	76
314	The development of stationary battery storage systems in Germany IA market review. <i>Journal of Energy Storage</i> , <b>2020</b> , 29, 101153	7.8	75
313	Modeling of Mass and Heat Transport in Planar Substrate Type SOFCs. <i>Journal of the Electrochemical Society</i> , <b>2003</b> , 150, A783	3.9	75
312	Long-term power-to-gas potential from wind and solar power: A country analysis for Italy.  International Journal of Hydrogen Energy, 2017, 42, 13389-13406	6.7	74

311	Novel method for investigation of two-phase flow in liquid feed direct methanol fuel cells using an aqueous H2O2 solution. <i>Journal of Power Sources</i> , <b>2004</b> , 125, 1-9	8.9	73
310	Magnetotomographyll new method for analysing fuel cell performance and quality. <i>Journal of Power Sources</i> , <b>2005</b> , 143, 67-74	8.9	73
309	Heat and power management of a direct-methanol-fuel-cell (DMFC) system. <i>Journal of Power Sources</i> , <b>2002</b> , 111, 268-282	8.9	72
308	A hydrogen supply chain with spatial resolution: Comparative analysis of infrastructure technologies in Germany. <i>Applied Energy</i> , <b>2019</b> , 247, 438-453	10.7	70
307	Small-scale testing of a precious metal catalyst in the autothermal reforming of various hydrocarbon feeds. <i>Journal of Power Sources</i> , <b>2002</b> , 106, 231-237	8.9	69
306	In-situ synchrotron X-ray radiography on high temperature polymer electrolyte fuel cells. <i>Electrochemistry Communications</i> , <b>2010</b> , 12, 1436-1438	5.1	68
305	GIS-based scenario calculations for a nationwide German hydrogen pipeline infrastructure. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 3813-3829	6.7	64
304	Fuel cells for mobile and stationary applications dost analysis for combined heat and power stations on the basis of fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2003</b> , 28, 703-711	6.7	64
303	Large area high resolution neutron imaging detector for fuel cell research. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 4631-4637	8.9	62
302	Power-to-Gas: Electrolyzers as an alternative to network expansion [An example from a distribution system operator. <i>Applied Energy</i> , <b>2018</b> , 210, 182-197	10.7	62
301	Combined local current distribution measurements and high resolution neutron radiography of operating Direct Methanol Fuel Cells. <i>Electrochemistry Communications</i> , <b>2009</b> , 11, 1606-1609	5.1	60
300	The influence of gas diffusion layer wettability on direct methanol fuel cell performance: A combined local current distribution and high resolution neutron radiography study. <i>Journal of Power Sources</i> , <b>2010</b> , 195, 4765-4771	8.9	59
299	Efficiency analysis of a hydrogen-fueled solid oxide fuel cell system with anode off-gas recirculation. <i>Journal of Power Sources</i> , <b>2016</b> , 328, 105-113	8.9	59
298	In situ approach for current distribution measurement in fuel cells. <i>Journal of Power Sources</i> , <b>2006</b> , 154, 184-191	8.9	58
297	3D analysis, modeling and simulation of transport processes in compressed fibrous microstructures, using the Lattice Boltzmann method. <i>Electrochimica Acta</i> , <b>2013</b> , 110, 325-334	6.7	57
296	Results of a 20 000 h lifetime test of a 7 kW direct methanol fuel cell (DMFC) hybrid system I degradation of the DMFC stack and the energy storage. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 301	3 <sup>3</sup> 35025	; <sup>56</sup>
295	3D transient thermomechanical behaviour of a full scale SOFC short stack. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 4099-4107	6.7	55
294	Performance enhancement of PEM electrolyzers through iridium-coated titanium porous transport layers. <i>Electrochemistry Communications</i> , <b>2018</b> , 97, 96-99	5.1	55

## (2018-2013)

293	Durability test and degradation behavior of a 2.5fkW SOFC stack with internal reforming of LNG. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 16344-16353	6.7	53
292	Hydrogen Diffusivity and Electrolyte Permeability of the Zirfon PERL Separator for Alkaline Water Electrolysis. <i>Journal of the Electrochemical Society</i> , <b>2016</b> , 163, F1480-F1488	3.9	52
291	Comparison of light-duty transportation fuels produced from renewable hydrogen and green carbon dioxide. <i>Applied Energy</i> , <b>2018</b> , 231, 757-767	10.7	52
290	H2-based synthetic fuels: A techno-economic comparison of alcohol, ether and hydrocarbon production. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 5395-5414	6.7	51
289	3D modeling of a 2001cm2 HT-PEFC short stack. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 2430	0 <del>62/1</del> 39	49
288	Initial approaches in benchmarking and round robin testing for proton exchange membrane water electrolyzers. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 9174-9187	6.7	48
287	Fuel cell systems with reforming of petroleum-based and synthetic-based diesel and kerosene fuels for APU applications. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 6405-6421	6.7	48
286	Correlation of Synchrotron X-ray Radiography and Electrochemical Impedance Spectroscopy for the Investigation of HT-PEFCs. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, F398-F404	3.9	48
285	A novel reactor type for autothermal reforming of diesel fuel and kerosene. <i>Applied Energy</i> , <b>2015</b> , 150, 176-184	10.7	46
284	Fuel Processing of Diesel and Kerosene for Auxiliary Power Unit Applications. <i>Energy &amp; amp; Fuels</i> , <b>2013</b> , 27, 4386-4394	4.1	46
283	Techno-economic analysis of a potential energy trading link between Patagonia and Japan based on CO2 free hydrogen. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 12733-12747	6.7	45
282	Life Cycle Assessment of hydrogen transport and distribution options. <i>Journal of Cleaner Production</i> , <b>2018</b> , 199, 431-443	10.3	45
281	Early power to gas applications: Reducing wind farm forecast errors and providing secondary control reserve. <i>Applied Energy</i> , <b>2017</b> , 192, 551-562	10.7	45
280	Concepts and investment cost analyses of multi-stage membrane systems used in post-combustion processes. <i>Energy Procedia</i> , <b>2009</b> , 1, 269-278	2.3	45
279	Validation and characterization of suitable materials for bipolar plates in PEM water electrolysis. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11385-11391	6.7	44
278	In-situ two-phase flow investigation of different porous transport layer for a polymer electrolyte membrane (PEM) electrolyzer with neutron spectroscopy. <i>Journal of Power Sources</i> , <b>2018</b> , 390, 108-115	8.9	43
277	Dealloyed PtNi-CoreBhell Nanocatalysts Enable Significant Lowering of Pt Electrode Content in Direct Methanol Fuel Cells. <i>ACS Catalysis</i> , <b>2019</b> , 9, 3764-3772	13.1	42
276	Carsharing with fuel cell vehicles: Sizing hydrogen refueling stations based on refueling behavior. <i>Applied Energy</i> , <b>2018</b> , 228, 1540-1549	10.7	42

275	Modeling hydrogen starvation conditions in proton-exchange membrane fuel cells. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 255-263	8.9	42
274	Performance analysis of HT-PEFC stacks. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 9171-9181	6.7	41
273	Solid oxide fuel cell operating on liquid organic hydrogen carrier-based hydrogen Imaking full use of heat integration potentials. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 1758-1768	6.7	40
272	The future of European onshore wind energy potential: Detailed distribution and simulation of advanced turbine designs. <i>Energy</i> , <b>2019</b> , 182, 1222-1238	7.9	39
271	The stability challenge on the pathway to high-current-density polymer electrolyte membrane water electrolyzers. <i>Electrochimica Acta</i> , <b>2018</b> , 278, 324-331	6.7	39
270	Optimised Mixture Formation for Diesel Fuel Processing. <i>Fuel Cells</i> , <b>2008</b> , 8, 129-137	2.9	39
269	The separation of CO2 from ambient air 🛭 techno-economic assessment. <i>Applied Energy</i> , <b>2018</b> , 218, 361-381	10.7	38
268	Comparison of hydrogen storage with diesel-generator system in a PVINEC hybrid system. <i>Solar Energy</i> , <b>2003</b> , 75, 187-198	6.8	38
267	Flexible sector coupling with hydrogen: A climate-friendly fuel supply for road transport. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 12918-12930	6.7	37
266	A Review on Time Series Aggregation Methods for Energy System Models. <i>Energies</i> , <b>2020</b> , 13, 641	3.1	37
265	Raman study of the polybenzimidazole-phosphoric acid interactions in membranes for fuel cells. <i>Physical Chemistry Chemical Physics</i> , <b>2012</b> , 14, 10022-6	3.6	37
264	Gas Permeation through Nafion. Part 2: Resistor Network Model. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 25156-25169	3.8	36
263	Options of natural gas pipeline reassignment for hydrogen: Cost assessment for a Germany case study. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 12095-12107	6.7	36
262	Energetically-optimal PEM electrolyzer pressure in power-to-gas plants. <i>Applied Energy</i> , <b>2018</b> , 218, 192-	1.987	36
261	Comparison of efficiencies of low, mean and high temperature fuel cell Systems. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 11056-11067	6.7	36
260	A techno economic analysis of the power to gas route. <i>Journal of CO2 Utilization</i> , <b>2019</b> , 34, 616-634	7.6	35
259	Non-fossil CO2 recyclingThe technical potential for the present and future utilization for fuels in Germany. <i>Journal of CO2 Utilization</i> , <b>2019</b> , 30, 130-141	7.6	34
258	PEM water electrolysis: Innovative approaches towards catalyst separation, recovery and recycling. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 3450-3455	6.7	33

257	Bypassing renewable variability with a reversible solid oxide cell plant. <i>Applied Energy</i> , <b>2018</b> , 217, 101-	1120.7	32
256	Long-term stability at fuel processing of diesel and kerosene. <i>International Journal of Hydrogen Energy</i> , <b>2014</b> , 39, 18027-18036	6.7	32
255	Numerical modelling and experimental validation of a planar type pre-reformer in SOFC technology. <i>International Journal of Hydrogen Energy</i> , <b>2009</b> , 34, 6425-6436	6.7	32
254	Analytical and Numerical Analysis of PEM Fuel Cell Performance Curves. <i>Journal of the Electrochemical Society</i> , <b>2005</b> , 152, A1290	3.9	32
253	Influence of operating parameters on overall system efficiencies using solid oxide electrolysis technology. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 7103-7113	6.7	31
252	Optimized electrolyzer operation: Employing forecasts of wind energy availability, hydrogen demand, and electricity prices. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 4387-4397	6.7	31
251	Investigating the influence of sweep gas on CO2/N2 membranes for post-combustion capture. <i>International Journal of Greenhouse Gas Control</i> , <b>2013</b> , 13, 180-190	4.2	31
250	Energetic and economic evaluation of membrane-based carbon capture routes for power plant processes. <i>International Journal of Greenhouse Gas Control</i> , <b>2016</b> , 44, 124-139	4.2	30
249	Energy Storage as Part of a Secure Energy Supply. ChemBioEng Reviews, 2017, 4, 144-210	5.2	29
248	High-pressure water electrolysis: Electrochemical mitigation of product gas crossover. <i>Electrochimica Acta</i> , <b>2015</b> , 156, 321-327	6.7	29
247	Design and evaluation of hydrogen electricity reconversion pathways in national energy systems using spatially and temporally resolved energy system optimization. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 9594-9607	6.7	29
246	CO2 emission reduction in the cement industry by using a solar calciner. <i>Renewable Energy</i> , <b>2020</b> , 145, 1578-1596	8.1	29
245	Life cycle assessment of a small-scale methanol production system: A Power-to-Fuel strategy for biogas plants. <i>Journal of Cleaner Production</i> , <b>2020</b> , 271, 122476	10.3	28
244	The techno-economic potential of offshore wind energy with optimized future turbine designs in Europe. <i>Applied Energy</i> , <b>2019</b> , 255, 113794	10.7	28
243	A battery-fuel cell hybrid auxiliary power unit for trucks: Analysis of direct and indirect hybrid configurations. <i>Energy Conversion and Management</i> , <b>2016</b> , 127, 312-323	10.6	27
242	Promising catalytic synthesis pathways towards higher alcohols as suitable transport fuels based on H2 and CO2. <i>Journal of CO2 Utilization</i> , <b>2018</b> , 27, 223-237	7.6	27
241	How gas separation membrane competes with chemical absorption in postcombustion capture. <i>Energy Procedia</i> , <b>2011</b> , 4, 629-636	2.3	27
240	A hybrid method to assess interface debonding by finite fracture mechanics. <i>Engineering Fracture Mechanics</i> , <b>2006</b> , 73, 994-1008	4.2	27

239	Test of a watergas-shift reactor on a 3kWe-scaledesign points for high- and low-temperature shift reaction. <i>Journal of Power Sources</i> , <b>2005</b> , 152, 189-195	8.9	27
238	Comparison of a fuel-driven and steam-driven ejector in solid oxide fuel cell systems with anode off-gas recirculation: Part-load behavior. <i>Journal of Power Sources</i> , <b>2015</b> , 277, 251-260	8.9	26
237	Evaluating Land Eligibility Constraints of Renewable Energy Sources in Europe. <i>Energies</i> , <b>2018</b> , 11, 1246	3.1	26
236	On the mobility of carbon-supported platinum nanoparticles towards unveiling cathode degradation in water electrolysis. <i>Journal of Power Sources</i> , <b>2017</b> , 365, 53-60	8.9	26
235	3D modeling of an HT-PEFC stack using reformate gas. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 12438-12450	6.7	26
234	3D coupled CFD/FEM modelling and experimental validation of a planar type air pre-heater used in SOFC technology. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 6851-6861	6.7	26
233	The current voltage plot of PEM fuel cell with long feed channels. <i>Electrochemistry Communications</i> , <b>2001</b> , 3, 73-80	5.1	26
232	Materials, interfaces and production techniques for planar solid oxide fuel cells. <i>Solid State Ionics</i> , <b>1996</b> , 86-88, 1235-1239	3.3	26
231	Advances in autothermal reformer design. <i>Applied Energy</i> , <b>2017</b> , 198, 88-98	10.7	25
230	Cascaded Membrane Processes for Post-Combustion CO2 Capture. <i>Chemical Engineering and Technology</i> , <b>2012</b> , 35, 489-496	2	25
229	Reduction of methanol crossover in a flowing electrolyte-direct methanol fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 21530-21545	6.7	24
228	Solar hydrogen production: a bottom-up analysis of different photovoltaic lectrolysis pathways. <i>Sustainable Energy and Fuels</i> , <b>2019</b> , 3, 801-813	5.8	24
227	Development of HT-PEFC stacks in the kW range. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 4705-4713	6.7	24
226	Interface resolving two-phase flow simulations in gas channels relevant for polymer electrolyte fuel cells using the volume of fluid approach. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 2961-2	976	23
225	Investigation of a Hybrid System for Post-Combustion Capture. <i>Energy Procedia</i> , <b>2014</b> , 63, 1756-1772	2.3	23
224	Temperature distribution in a liquid-cooled HT-PEFC stack. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 1943-1951	6.7	23
223	A structured test reactor for the evaporation of methanol on the basis of a catalytic combustion. <i>Catalysis Today</i> , <b>2001</b> , 69, 193-200	5.3	23
222	Hydrogen Production via Autothermal Reforming of Diesel Fuel. <i>Fuel Cells</i> , <b>2004</b> , 4, 225-230	2.9	22

## (2016-2017)

221	A diesel fuel processor for fuel-cell-based auxiliary power unit applications. <i>Journal of Power Sources</i> , <b>2017</b> , 355, 44-52	8.9	21
220	Effect of cascade storage system topology on the cooling energy consumption in fueling stations for hydrogen vehicles. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 6256-6265	6.7	21
219	Electrical start-up for diesel fuel processing in a fuel-cell-based auxiliary power unit. <i>Journal of Power Sources</i> , <b>2016</b> , 302, 315-323	8.9	21
218	On the interfacial charge transfer between solid and liquid Li electrolytes. <i>Physical Chemistry Chemical Physics</i> , <b>2017</b> , 19, 26596-26605	3.6	21
217	Overview on the Julich SOFC Development Status. ECS Transactions, 2013, 57, 23-33	1	21
216	Ecological assessment of fuel cell electric vehicles with special focus on type IV carbon fiber hydrogen tank. <i>Journal of Cleaner Production</i> , <b>2021</b> , 278, 123277	10.3	21
215	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. <i>Environment International</i> , <b>2021</b> , 152, 106474	12.9	21
214	Off-grid power-to-fuel systems for a market launch scenario IA techno-economic assessment. <i>Applied Energy</i> , <b>2019</b> , 250, 1099-1109	10.7	20
213	Heat exchanger design for autothermal reforming of diesel. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 11830-11846	6.7	20
212	Combination of autothermal reforming with water-gas-shift reaction mall-scale testing of different water-gas-shift catalysts. <i>Journal of Power Sources</i> , <b>2004</b> , 126, 112-118	8.9	20
211	Re-energizing energy supply: Electrolytically-produced hydrogen as a flexible energy storage medium and fuel for road transport. <i>Journal of Power Sources</i> , <b>2017</b> , 342, 320-326	8.9	19
210	Investigating the influence of the pressure distribution in a membrane module on the cascaded membrane system for post-combustion capture. <i>International Journal of Greenhouse Gas Control</i> , <b>2015</b> , 39, 194-204	4.2	19
209	Operation Experience with a 20 kW SOFC System. Fuel Cells, 2014, 14, 489-499	2.9	19
208	Role of electricity interconnections and impact of the geographical scale on the French potential of producing hydrogen via electricity surplus by 2035. <i>Energy</i> , <b>2019</b> , 172, 977-990	7.9	19
207	Methanol as a renewable energy carrier: An assessment of production and transportation costs for selected global locations. <i>Advances in Applied Energy</i> , <b>2021</b> , 3, 100050		19
206	Robust design of a future 100% renewable european energy supply system with hydrogen infrastructure. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> ,	6.7	19
205	A completely slot die coated membrane electrode assembly. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 7053-7058	6.7	18
204	Routes for deactivation of different autothermal reforming catalysts. <i>Journal of Power Sources</i> , <b>2016</b> , 325, 51-63	8.9	18

203	Impact of porous transport layer compression on hydrogen permeation in PEM water electrolysis. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 4008-4014	6.7	18
202	The influence of water channel geometry and proton mobility on the conductivity of Nafion . <i>Electrochimica Acta</i> , <b>2016</b> , 214, 362-369	6.7	18
201	Future Hydrogen Markets for Transportation and Industry: The Impact of CO2 Taxes. <i>Energies</i> , <b>2019</b> , 12, 4707	3.1	18
200	A solid oxide fuel cell operating on liquid organic hydrogen carrier-based hydrogen IA kinetic model of the hydrogen release unit and system performance. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 13794-13806	6.7	17
199	Operating strategies for fuel processing systems with a focus on watergas shift reactor stability. <i>Applied Energy</i> , <b>2016</b> , 164, 540-552	10.7	17
198	A Top-Down Spatially Resolved Electrical Load Model. <i>Energies</i> , <b>2017</b> , 10, 361	3.1	17
197	Influence of the ionomer type in direct methanol fuel cell (DMFC) anode catalyst layers on the properties of primary and secondary pores. <i>Journal of Power Sources</i> , <b>2013</b> , 228, 57-67	8.9	17
196	Hierarchical 3D multiphysics modelling in the design and optimisation of SOFC system components. <i>International Journal of Hydrogen Energy</i> , <b>2011</b> , 36, 4400-4408	6.7	17
195	Materials, manufacturing technology and costs of fuel cell membranes. <i>Desalination</i> , <b>2010</b> , 250, 1038-1	<b>040</b> .3	17
194	Analysis of Single PEM Fuel Cell Performances Based on Current Density Distribution Measurement. <i>Journal of Fuel Cell Science and Technology</i> , <b>2006</b> , 3, 351-357		17
193	Elimination of by-products of autothermal diesel reforming. <i>Chemical Engineering Journal</i> , <b>2016</b> , 306, 107-116	14.7	17
192	Design and Experimental Investigation of a Heat Pipe Supported External Cooling System for HT-PEFC Stacks. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10,		16
191	An option for stranded renewables: electrolytic-hydrogen in future energy systems. <i>Sustainable Energy and Fuels</i> , <b>2018</b> , 2, 1500-1515	5.8	16
190	A modeler@guide to handle complexity in energy systems optimization. <i>Advances in Applied Energy</i> , <b>2021</b> , 4, 100063		16
189	Robust optimal discrete arc sizing for tree-shaped potential networks. <i>Computational Optimization and Applications</i> , <b>2019</b> , 73, 791-819	1.4	15
188	Semiempirical thermodynamic modeling of a direct methanol fuel cell system. <i>International Journal of Energy Research</i> , <b>2019</b> , 43, 3601-3615	4.5	15
187	An integrated diesel fuel processing system with thermal start-up for fuel cells. <i>Applied Energy</i> , <b>2018</b> , 226, 145-159	10.7	15
186	In-plane neutron radiography for studying the influence of surface treatment and design of cathode flow fields in direct methanol fuel cells. <i>International Journal of Hydrogen Energy</i> , <b>2013</b> , 38, 24	43- <u>7</u> 45	4 <sup>15</sup>

185	Carbon NMR investigation of the polybenzimidazoled imethylacetamide interactions in membranes for fuel cells. <i>New Journal of Chemistry</i> , <b>2013</b> , 37, 152-156	3.6	15	
184	Optimisation of a solid oxide fuel cell reformer using surrogate modelling, design of experiments and computational fluid dynamics. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 12540-12547	6.7	15	
183	Bottom-up energy supply optimization of a national building stock. <i>Energy and Buildings</i> , <b>2020</b> , 209, 109	9 <del>6</del> 67	15	
182	The impact of diesel vehicles on NO and PM10 emissions from road transport in urban morphological zones: A case study in North Rhine-Westphalia, Germany. <i>Science of the Total Environment</i> , <b>2020</b> , 727, 138583	10.2	15	
181	Extreme events in time series aggregation: A case study for optimal residential energy supply systems. <i>Applied Energy</i> , <b>2020</b> , 275, 115223	10.7	14	
180	Large-scale DMFC Stack Model: Feed Disturbances and Their Impact on Stack Performance. <i>Fuel Cells</i> , <b>2012</b> , 12, 1032-1041	2.9	14	
179	Uniformly constrained land eligibility for onshore European wind power. <i>Renewable Energy</i> , <b>2020</b> , 146, 921-931	8.1	14	
178	The development of stationary battery storage systems in Germany Istatus 2020. <i>Journal of Energy Storage</i> , <b>2021</b> , 33, 101982	7.8	14	
177	Analysis of a Solid Oxide Fuel Cell System with Low Temperature Anode Off-Gas Recirculation. Journal of the Electrochemical Society, <b>2015</b> , 162, F982-F987	3.9	13	
176	Study of the catalytic combustion of lean hydrogen-air mixtures in a monolith reactor. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 17520-17530	6.7	13	
175	PEM Electrolysis Simulation and Validation. <i>ECS Transactions</i> , <b>2014</b> , 58, 1-9	1	13	
174	Comparative Investigation of Polymer Membranes for Post-combustion Capture. <i>Energy Procedia</i> , <b>2013</b> , 37, 1125-1134	2.3	13	
173	Energy storage characterization for a direct methanol fuel cell hybrid system. <i>Journal of Power Sources</i> , <b>2011</b> , 196, 5299-5308	8.9	13	
172	Development of Direct Methanol Fuel Cell Systems for Material Handling Applications. <i>Journal of Fuel Cell Science and Technology</i> , <b>2012</b> , 9,		13	
171	Iridium nanoparticles for the oxygen evolution reaction: Correlation of structure and activity of benchmark catalyst systems. <i>Electrochimica Acta</i> , <b>2019</b> , 302, 472-477	6.7	13	
170	Modeling polymer electrolyte fuel cells: A high precision analysis. <i>Applied Energy</i> , <b>2019</b> , 233-234, 1094-	1 <b>10</b> 3 <sub>7</sub>	13	
169	Simulation of a hybrid vehicle powertrain having direct methanol fuel cell system through a semi-theoretical approach. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 18981-18992	6.7	13	
168	Impact of reference values used for surface free energy determination: An uncertainty analysis.  International Journal of Adhesion and Adhesives, 2018, 82, 1-7	3.4	13	

167	Mechanical characterization and durability of sintered porous transport layers for polymer electrolyte membrane electrolysis. <i>Journal of Power Sources</i> , <b>2018</b> , 374, 84-91	8.9	13
166	An autothermal reforming system for diesel and jet fuel with quick start-up capability. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 27749-27764	6.7	12
165	Water management in membrane electrolysis and options for advanced plants. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 10147-10155	6.7	12
164	The Future of Fossil Fired Power Plants in Germany Lifetime Analysis. <i>Energies</i> , <b>2018</b> , 11, 1616	3.1	12
163	Homogeneity analysis of square meter-sized electrodes for PEM electrolysis and PEM fuel cells <b>2018</b> , 15, 1423-1432		12
162	Start-Up of HT-PEFC Systems Operating with Diesel and Kerosene for APU Applications. <i>Fuel Cells</i> , <b>2014</b> , 14, 266-276	2.9	12
161	Membranen fil Polymerelektrolyt-Brennstoffzellen. Chemie-Ingenieur-Technik, 2003, 75, 1591-1597	0.8	12
160	Benchmark Cost Analysis of Main PEFC-Ionomer Membrane Solutions. <i>Journal of Fuel Cell Science and Technology</i> , <b>2004</b> , 1, 56-60		12
159	Geospatial modelling of the hydrogen infrastructure in France in order to identify the most suited supply chains. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 3053-3072	6.7	12
158	Control techniques and the modeling of electrical power flow across transmission networks. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 82, 3452-3467	16.2	12
157	Analysis of the Cathode Electrical Contact in SOFC Stacks. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, F677-F683	3.9	11
156	Impact of clamping pressure and stress relaxation on the performance of different polymer electrolyte membrane water electrolysis cell designs. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 23556-23567	6.7	11
155	Reducing Computational Load for Mixed Integer Linear Programming: An Example for a District and an Island Energy System. <i>Energies</i> , <b>2019</b> , 12, 2825	3.1	11
154	Fault-tolerant model predictive control of a direct methanol-fuel cell system with actuator faults. <i>Control Engineering Practice</i> , <b>2017</b> , 66, 99-115	3.9	11
153	Power-to-Ships: Future electricity and hydrogen demands for shipping on the Atlantic coast of Europe in 2050. <i>Energy</i> , <b>2021</b> , 228, 120660	7.9	11
152	Extending the lifetime of direct methanol fuel cell systems to more than 20,000 h by applying ion exchange resins. <i>International Journal of Hydrogen Energy</i> , <b>2016</b> , 41, 15325-15334	6.7	10
151	The Impact of Drive Cycles and Auxiliary Power on Passenger Car Fuel Economy. <i>Energies</i> , <b>2018</b> , 11, 10	103.1	10
150	LargeEcale DMFC stack model: The effect of a condensation front on stack performance.  International Journal of Hydrogen Energy, <b>2013</b> , 38, 3373-3379	6.7	10

## (2015-2015)

149	Comparison of hydrogen and methane storage by means of a thermodynamic analysis. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 11530-11537	6.7	10
148	The Effect of the Reference Electrode Position on the Measurement of Half Cell Polarization in Proton-Exchange Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, F181-F186	3.9	10
147	Novel VHT-PEFC MEAs Based on ABPBI Membranes for APU Applications. <i>ECS Transactions</i> , <b>2008</b> , 12, 29-39	1	10
146	Operational experience with the fuel processing system for fuel cell drives. <i>Journal of Power Sources</i> , <b>2002</b> , 106, 333-337	8.9	10
145	Hybrid Hydrogen Home Storage for Decentralized Energy Autonomy. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 21748-21763	6.7	10
144	Energy Storage Using Hydrogen Produced From Excess Renewable Electricity <b>2019</b> , 165-199		10
143	Comparison of single-cell testing, short-stack testing and mathematical modeling methods for a direct methanol fuel cell. <i>International Journal of Hydrogen Energy</i> , <b>2021</b> , 46, 4844-4856	6.7	10
142	Impact of gas diffusion layer mechanics on PEM fuel cell performance. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 23406-23415	6.7	9
141	Integration of Large-Scale Variable Renewable Energy Sources into the Future European Power System: On the Curtailment Challenge. <i>Energies</i> , <b>2020</b> , 13, 5490	3.1	9
140	Clean mobility infrastructure and sector integration in long-term energy scenarios: The case of Italy. <i>Renewable and Sustainable Energy Reviews</i> , <b>2020</b> , 133, 110086	16.2	9
139	Spray formation of middle distillates for autothermal reforming. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 16946-16960	6.7	9
138	Neutron radiography and current distribution measurements for studying cathode flow field properties of direct methanol fuel cells. <i>International Journal of Energy Research</i> , <b>2014</b> , 38, 926-943	4.5	9
137	Hydrogen in the Chemical Industry <b>2016</b> , 19-40		9
136	Impact of silicate substrate and cosintering on cathode performance in an inert substrate-supported solid oxide fuel cell. <i>Journal of Power Sources</i> , <b>2019</b> , 413, 334-343	8.9	9
135	Greener production of dimethyl carbonate by the Power-to-Fuel concept: a comparative techno-economic analysis. <i>Green Chemistry</i> , <b>2021</b> , 23, 1734-1747	10	9
134	Quantitative analysis of sub-ppm traces of hydrocarbons in the product gas from diesel reforming. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 4020-4030	6.7	8
133	Syngas production performance and degradation analysis of a solid oxide electrolyzer stack. Journal of Power Sources, <b>2019</b> , 433, 126666	8.9	8
132	XRD analysis of strain states in epitaxial YSZ/RE2O3 (RE = Y, Er) multilayers as a function of layer thickness. <i>Solid State Ionics</i> , <b>2015</b> , 273, 2-7	3.3	8

131	Solid Oxide Electrolyzer Stack with 20,000 h of Operation. ECS Transactions, 2017, 78, 2885-2893	1	8
130	Development and Test of a Solid Oxide Fuel Cell Subsystem with a Low Temperature Anode Off-Gas Recirculation. <i>ECS Transactions</i> , <b>2017</b> , 78, 2489-2495	1	8
129	Pseudo-half-cell measurements on symmetrical catalyst-coated membranes and their relevance for optimizing DMFC anodes. <i>Journal of Applied Electrochemistry</i> , <b>2010</b> , 40, 29-38	2.6	8
128	Desulfurization of Jet A-1 and Heating Oil: General Aspects and Experimental Results. <i>ECS Transactions</i> , <b>2008</b> , 12, 543-554	1	8
127	Assessment of the Sealing Joints within SOFC Stacks by Numerical Simulation. Fuel Cells, 2006, 6, 107-1	<b>12</b> 9	8
126	Electrochemical Performance and Degradation Analysis of an SOFC Short Stack Following Operation of More than 100,000 Hours. <i>Journal of the Electrochemical Society</i> , <b>2019</b> ,	3.9	8
125	Water-gas shift reactor for fuel cell systems: Stable operation for 5000 hours. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 19222-19230	6.7	8
124	Design and experimental validation of an HT-PEFC stack with metallic BPP. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 18488-18497	6.7	8
123	Setup and experimental validation of a 5lkW HT-PEFC stack. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 11596-11604	6.7	7
122	Thermodynamic and ecological preselection of synthetic fuel intermediates from biogas at farm sites. <i>Energy, Sustainability and Society</i> , <b>2020</b> , 10,	3.9	7
121	3D Modeling of One and Two Component Gas Flow in Fibrous Microstructures in Fuel Cells by Using the Lattice-Boltzmann Method. <i>ECS Transactions</i> , <b>2013</b> , 50, 207-219	1	7
120	Thermogravimetric and Spectroscopic Investigation of the Interaction between Polybenzimidazole and Phosphoric Acid. <i>ECS Transactions</i> , <b>2013</b> , 50, 1155-1165	1	7
119	The influence of cathode flow field surface properties on the local and time-dependent performance of direct methanol fuel cells. <i>Electrochemistry Communications</i> , <b>2010</b> , 12, 1318-1321	5.1	7
118	Manufacture of Robust Catalyst Layers for the DMFC. Fuel Cells, 2004, 4, 175-179	2.9	7
117	Brazing of metallic conductors onto ceramic plates in solid oxide fuel cells Part 1 Attaching a current collector. <i>Journal of Materials Science</i> , <b>2001</b> , 36, 1775-1782	4.3	7
116	Reactions at the interface La0.5Ca0.5MnO3-YSZ/Al2O3 under anodic current. <i>Ionics</i> , <b>1996</b> , 2, 184-189	2.7	7
115	A techno-economic perspective on solar-to-hydrogen concepts through 2025. <i>Sustainable Energy and Fuels</i> , <b>2020</b> , 4, 5818-5834	5.8	7
114	Influence of Stoichiometry on the Two-Phase Flow Behavior of Proton Exchange Membrane Electrolyzers. <i>Energies</i> , <b>2019</b> , 12, 350	3.1	7

## (2010-2019)

113	Modeling hydrogen networks for future energy systems: A comparison of linear and nonlinear approaches. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 32136-32150	6.7	7
112	Investigation of Operating Parameters in Conjunction with Catalyst Deactivation of the Water-Gas Shift Reactor in a Fuel Cell System. <i>ECS Transactions</i> , <b>2015</b> , 65, 99-114	1	6
111	Effect of power quality on the design of proton exchange membrane water electrolysis systems. <i>Applied Energy</i> , <b>2020</b> , 279, 115791	10.7	6
110	Post-Test Characterization of Solid Oxide Fuel-Cell Stacks <b>2012</b> , 469-492		6
109	Investigation of HT-PEFCs by Means of Synchrotron X-ray Radiography and Electrochemical Impedance Spectroscopy. <i>ECS Transactions</i> , <b>2011</b> , 41, 1413-1422	1	6
108	Urban transportation at an inflection point: An analysis of potential influencing factors.  Transportation Research, Part D: Transport and Environment, 2021, 92, 102733	6.4	6
107	Parasitic Currents Caused by Different Ionic and Electronic Conductivities in Fuel Cell Anodes. <i>ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. <i>ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. <i>ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic and Electronic Conductivities in Fuel Cell Anodes. ACS Applied Materials &amp; Different Ionic Conductivities Ionic Conductivi</i></i></i>	9.5	5
106	A 3D multiphysics model and its experimental validation for predicting the mixing and combustion characteristics of an afterburner. <i>International Journal of Hydrogen Energy</i> , <b>2015</b> , 40, 9462-9472	6.7	5
105	Impact of different weather years on the design of hydrogen supply pathways for transport needs. <i>International Journal of Hydrogen Energy</i> , <b>2019</b> , 44, 25442-25456	6.7	5
104	Study of Cathode Catalyst Layer Parameters for HT-PEMFC Using Electrochemical Impedance Spectroscopy. <i>ECS Transactions</i> , <b>2017</b> , 80, 27-36	1	5
103	Start-Up and Load-Change Behavior of a Catalytic Burner for a Fuel-Cell-Based APU for Diesel Fuel. <i>Fuel Cells</i> , <b>2015</b> , 15, 15-26	2.9	5
102	The Long Way of Achieving a Durability of 20,000 h in a DMFC System. <i>Advances in Science and Technology</i> , <b>2014</b> , 93, 56-60	0.1	5
101	Integration of H2-Selective Membrane Reactors in the Integrated Gasification Combined Cycle for CO2 Separation. <i>Chemical Engineering and Technology</i> , <b>2012</b> , 35, 555-560	2	5
100	Water Evolution in Direct Methanol Fuel Cell Cathodes Studied by Synchrotron X-Ray Radiography. <i>Fuel Cells</i> , <b>2013</b> , 13, 371-379	2.9	5
99	Design and Optimisation of SOFC System Components using a Trio Approach: Measurements, Design of Experiments, and 3D Computational Fluid Dynamics. <i>ECS Transactions</i> , <b>2009</b> , 25, 1195-1200	1	5
98	Preparation techniques and materials for long term stable SOFC - Single cell membranes. <i>Ionics</i> , <b>1997</b> , 3, 143-148	2.7	5
97	Experiences with a CFD Based Two Stage SOFC Stack Modeling Concept and Its Application. <i>ECS Transactions</i> , <b>2007</b> , 7, 1831-1840	1	5
96	Design of In-Situ Experimentation for the Study of Fuel Cells with X-rays and Neutrons. <i>Materialpruefung/Materials Testing</i> , <b>2010</b> , 52, 725-735	1.9	5

95	On the socio-technical potential for onshore wind in Europe: A response to Enevoldsen et al. (2019), Energy Policy, 132, 1092-1100. <i>Energy Policy</i> , <b>2020</b> , 145, 111693	7.2	5
94	Hydrogen Road Transport Analysis in the Energy System: A Case Study for Germany through 2050. <i>Energies</i> , <b>2021</b> , 14, 3166	3.1	5
93	A review of decarbonization options for the glass industry. <i>Energy Conversion and Management: X</i> , <b>2021</b> , 10, 100083	2.5	5
92	Future Power Train Solutions for Long-Haul Trucks. Sustainability, <b>2021</b> , 13, 2225	3.6	5
91	Layer Formation from Polymer Carbon-Black Dispersions. <i>Coatings</i> , <b>2018</b> , 8, 450	2.9	5
90	Electrochemical Performance and Degradation Analysis of an SOFC Short Stack for Operation of More than 100,000 Hours. <i>ECS Transactions</i> , <b>2019</b> , 91, 687-696	1	4
89	Development and Testing of a 5kW-Class Reversible Solid Oxide Cell System. <i>ECS Transactions</i> , <b>2019</b> , 91, 2495-2506	1	4
88	Property Data Estimation for Hemiformals, Methylene Glycols and Polyoxymethylene Dimethyl Ethers and Process Optimization in Formaldehyde Synthesis. <i>Energies</i> , <b>2020</b> , 13, 3401	3.1	4
87	Synchrotron Radiography for a Proton Exchange Membrane (PEM) Electrolyzer. Fuel Cells, 2020, 20, 300	0-23.96	4
86	Methodologies for Fuel Cell Process Engineering <b>2012</b> , 597-644		4
86 85	Methodologies for Fuel Cell Process Engineering <b>2012</b> , 597-644  CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040	0.8	4
	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. Chemie-Ingenieur-Technik, <b>2012</b> ,	0.8	4 4
85	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040  Slot-Die Coating: A New Preparation Method for Direct Methanol Fuel Cells Catalyst Layers. <i>Journal</i>	0.8	4 4 4
85 84	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040  Slot-Die Coating: A New Preparation Method for Direct Methanol Fuel Cells Catalyst Layers. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10,  Spatially Resolved Characterization of DMFCs Aged under Critical Conditions. <i>ECS Transactions</i> ,		4
85 84 83	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040  Slot-Die Coating: A New Preparation Method for Direct Methanol Fuel Cells Catalyst Layers. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10,  Spatially Resolved Characterization of DMFCs Aged under Critical Conditions. <i>ECS Transactions</i> , <b>2013</b> , 50, 841-852	1	4
85 84 83 82	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040  Slot-Die Coating: A New Preparation Method for Direct Methanol Fuel Cells Catalyst Layers. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10,  Spatially Resolved Characterization of DMFCs Aged under Critical Conditions. <i>ECS Transactions</i> , <b>2013</b> , 50, 841-852  Start-up Behavior of Fuel Processing Systems. <i>ECS Transactions</i> , <b>2009</b> , 17, 599-610  Brazing of metallic conductors onto ceramic plates in solid oxide fuel cells Part II Attaching	1	4 4
85 84 83 82 81	CCS-Abscheidetechniken: Stand der Technik und Entwicklungen. <i>Chemie-Ingenieur-Technik</i> , <b>2012</b> , 84, 1026-1040  Slot-Die Coating: A New Preparation Method for Direct Methanol Fuel Cells Catalyst Layers. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10,  Spatially Resolved Characterization of DMFCs Aged under Critical Conditions. <i>ECS Transactions</i> , <b>2013</b> , 50, 841-852  Start-up Behavior of Fuel Processing Systems. <i>ECS Transactions</i> , <b>2009</b> , 17, 599-610  Brazing of metallic conductors onto ceramic plates in solid oxide fuel cells Part II Attaching conducting wires. <i>Journal of Materials Science</i> , <b>2001</b> , 36, 1783-1788  The biogas-oxyfuel process as a carbon source for power-to-fuel synthesis: Enhancing availability	1 1 4.3	4 4

77	Emergency power supply from photovoltaic battery systems in private households in case of a blackout 🖪 scenario analysis. <i>Energy Procedia</i> , <b>2018</b> , 155, 165-178	2.3	4
76	Potential of green ammonia production in India. International Journal of Hydrogen Energy, 2021, 46, 27	2 <i>467.<del>7</del>27</i>	2647
75	Highly integrated catalytic burner with laser-additive manufactured manifolds. <i>Reaction Chemistry and Engineering</i> , <b>2017</b> , 2, 437-445	4.9	3
74	Steering and in situ monitoring of drying phenomena during film fabrication <b>2019</b> , 16, 1213-1221		3
73	Analysis of a Solid Oxide Fuel Cell System with Low Temperature Anode Off-Gas Recirculation. <i>ECS Transactions</i> , <b>2015</b> , 68, 283-292	1	3
72	Architectural Concept and Evaluation of a Framework for the Efficient Automation of Computational Scientific Workflows: An Energy Systems Analysis Example. <i>Applied Sciences (Switzerland)</i> , <b>2019</b> , 9, 728	2.6	3
71	Study of Complete Methanol Depletion in Direct Methanol Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2014</b> , 161, F525-F534	3.9	3
70	Recent Developments of 3D Coupled Multiphysics SOFC Modelling At Forschungszentrum Julich. <i>ECS Transactions</i> , <b>2013</b> , 57, 2537-2541	1	3
69	3D Coupled Thermofluid-Thermomechanical Modelling and Experimental Validation of a Whole Solid Oxide Fuel Cell System. <i>ECS Transactions</i> , <b>2013</b> , 50, 139-142	1	3
68	Sr-Diffusion in Ce0.8Gd0.2O2-Layers for SOFC Application. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1542, 1		3
67	Perspektiven filden Ausbau der Wasserstoffinfrastruktur am Beispiel NRW. <i>Chemie-Ingenieur-Technik</i> , <b>2009</b> , 81, 591-598	0.8	3
66	Current Density Distribution Measurement in HT-PEFC Stacks Operated with Reformate Gas from Middle Distillates. <i>ECS Transactions</i> , <b>2011</b> , 41, 1935-1941	1	3
65	Life cycle costing of a self-sufficient solar-hydrogen system. <i>International Journal of Global Energy Issues</i> , <b>2004</b> , 21, 329	0.3	3
64	The Future of European Onshore Wind Energy Potential: Detailed Distribution and Simulation of Advanced Turbine Designs		3
63	Hydrogen Separation with Polymeric Membranes <b>2016</b> , 509-542		3
62	Development Study of an Air Independent Fuel Cell System for an Autonomous Underwater Vehicle (AUV). <i>ECS Transactions</i> , <b>2016</b> , 75, 491-501	1	3
61	Typical periods or typical time steps? A multi-model analysis to determine the optimal temporal aggregation for energy system models. <i>Applied Energy</i> , <b>2021</b> , 304, 117825	10.7	3
60	3D Multiscale-Multiphysics SOFC Modelling Status at the Institute of Electrochemical Process Engineering, FZ Julich. <i>ECS Transactions</i> , <b>2015</b> , 68, 2861-2866	1	2

59	An On-Demand Safety Gas Generator for Solid Oxide Fuel Cell and Electrolyzer Systems. <i>Fuel Cells</i> , <b>2017</b> , 17, 882-889	2.9	2
58	Technical Advancement of Fuel-Cell Research and Development <b>2012</b> , 1-42		2
57	Desulfurization for Fuel-Cell Systems <b>2012</b> , 1011-1044		2
56	Computational Fluid Dynamic Simulation Using Supercomputer Calculation Capacity <b>2012</b> , 703-732		2
55	Magnetography: A novel Characterization Tool for Li-Ion-Batteries. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1544, 1		2
54	1-Hexanol Based Catalyst Inks for Catalyst Layer Preparation for a DMFC. <i>Journal of Fuel Cell Science and Technology</i> , <b>2013</b> , 10, 061008		2
53	Challenges and important considerations when benchmarking single-cell alkaline electrolyzers. <i>International Journal of Hydrogen Energy</i> , <b>2022</b> , 47, 4294-4303	6.7	2
52	Reusability of decal substrates for the fabrication of catalyst coated membranes. <i>International Journal of Adhesion and Adhesives</i> , <b>2020</b> , 98, 102473	3.4	2
51	Stack Technology for PEM Electrolysis <b>2016</b> , 331-358		2
50	Development of a benchmarking model for lithium battery electrodes. <i>Journal of Power Sources</i> , <b>2016</b> , 320, 286-295	8.9	2
49	A methodological contribution to failure prediction of glass ceramics sealings in high-temperature solid oxide fuel cell stacks. <i>Journal of Power Sources</i> , <b>2021</b> , 507, 230301	8.9	2
48	A Versatile Model for Estimating the Fuel Consumption of a Wide Range of Transport Modes. <i>Energies</i> , <b>2022</b> , 15, 2232	3.1	2
47	Application Requirements/Targets for Fuel Cell APUs <b>2016</b> , 197-201		1
46	High Temperature Polymer Electrolyte Fuel Cells <b>2016</b> , 235-247		1
45	Fuel Cell Forklift Systems <b>2016</b> , 321-333		1
44	Proton Exchange Membrane Water Electrolysis <b>2016</b> , 343-356		1
43	Investigation of the Cooling System of a Membrane-based Post-combustion Process. <i>Energy Procedia</i> , <b>2017</b> , 114, 666-685	2.3	1
42	Development of a Pure Oxygen Fuel Cell System for an Autonomous Underwater Vehicle with Focus on Fuel Starvation due to Inert Gas Accumulation on the Anode. <i>ECS Transactions</i> , <b>2015</b> , 69, 963-	9 <del>7</del> 0	1

41	CFD-unterstExte Optimierung des Startvorgangs eines Brenngaserzeugungspackages fEdie Bordstromversorgung. <i>Chemie-Ingenieur-Technik</i> , <b>2014</b> , 86, 1440-1441	0.8	1
40	Impedance Spectroscopy for High-Temperature Fuel Cells <b>2012</b> , 439-467		1
39	Systemic tradeoff analysis of fuel cell mobility systems. <i>International Journal of Hydrogen Energy</i> , <b>2012</b> , 37, 12639-12649	6.7	1
38	High-Temperature Polymer Electrolyte Fuel-Cell Modeling <b>2012</b> , 819-838		1
37	Degradation Caused by Dynamic Operation and Starvation Conditions 2012, 543-570		1
36	Numerical Modeling of the Thermomechanically Induced Stress in Solid Oxide Fuel Cells <b>2012</b> , 767-790		1
35	Principles of Systems Engineering <b>2012</b> , 917-961		1
34	Strain States in YSZ / RE2O3 (RE = Er, Y) Multilayers as a Function of Layer Thickness and Their Effect on Interface Conductivity and Diffusion. <i>Materials Research Society Symposia Proceedings</i> , <b>2013</b> , 1542, 1		1
33	Membrane Electrode Assemblies Based on Hydrocarbon Electrolytes with Nitrile Groups for Direct Methanol Fuel Cells. <i>ECS Transactions</i> , <b>2013</b> , 50, 2139-2149	1	1
32	Design and Experimental Investigation of a Heat Pipe Supported External Cooling System for HT-PEFC Fuel Cell Stacks <b>2013</b> ,		1
31	Development of an open framework for a qualitative and quantitative comparison of power system and electricity grid models for Europe. <i>Renewable and Sustainable Energy Reviews</i> , <b>2022</b> , 159, 112055	16.2	1
30	Kosten der Wasserstoffbereitstellung in Versorgungssystemen auf Basis erneuerbarer Energien <b>2017</b> , 245-261		1
29	45% Cell Efficiency in DMFCs via Process Engineering. Fuel Cells, <b>2020</b> , 20, 507-514	2.9	1
28	Nickel Structures as a Template Strategy to Create Shaped Iridium Electrocatalysts for Electrochemical Water Splitting. <i>ACS Applied Materials &amp; Electrochemical Water Splitting</i> . <i>ACS Applied Materials &amp; Discourse Splitting</i> . 13, 13576-13585	9.5	1
27	Characterization of a New Flat Sheet Membrane Module Type for Gas Permeation. <i>Chemie-Ingenieur-Technik</i> , <b>2019</b> , 91, 30-37	0.8	1
26	An Overview of Promising Alternative Fuels for Road, Rail, Air, and Inland Waterway Transport in Germany. <i>Energies</i> , <b>2022</b> , 15, 1443	3.1	1
25	Classification of Building Types in Germany: A Data-Driven Modeling Approach. <i>Data</i> , <b>2022</b> , 7, 45	2.3	1
24	A Techno-Economic Assessment of Fischer Tropsch Fuels Based on Syngas from Co-Electrolysis. <i>Processes</i> , <b>2022</b> , 10, 699	2.9	1

23	The Pareto-optimal temporal aggregation of energy system models. <i>Applied Energy</i> , <b>2022</b> , 315, 119029	10.7	1
22	Fabrication of High Performing and Durable Nickel-Based Catalyst Coated Diaphragms for Alkaline Water Electrolyzers. <i>Journal of the Electrochemical Society</i> , <b>2022</b> , 169, 054502	3.9	1
21	Aus der Erde in die Erde. <i>Physik in Unserer Zeit</i> , <b>2012</b> , 43, 190-197	0.1	0
20	The Potential of Variable Renewable Energy Sources in Mexico: A Temporally Evaluated and Geospatially Constrained Techno-Economical Assessment. <i>Energies</i> , <b>2021</b> , 14, 5779	3.1	O
19	Analysing the water and land system impacts of Germany@future energy system. <i>Renewable and Sustainable Energy Reviews</i> , <b>2021</b> , 150, 111469	16.2	0
18	LoadProfileGenerator: An Agent-Based Behavior Simulation for Generating Residential Load Profiles. <i>Journal of Open Source Software</i> , <b>2022</b> , 7, 3574	5.2	O
17	Cation-Exchange Method Enables Uniform Iridium Oxide Nanospheres for Oxygen Evolution Reaction. <i>ACS Applied Nano Materials</i> , <b>2022</b> , 5, 4062-4071	5.6	О
16	Passenger car cost development through 2050. <i>Transportation Research, Part D: Transport and Environment</i> , <b>2021</b> , 101, 103110	6.4	O
15	Hydrogen production from bio-fuels using precious metal catalysts. <i>E3S Web of Conferences</i> , <b>2017</b> , 23, 03002	0.5	
14	Fuels for APU Applications <b>2016</b> , 183-196		
13	Reforming Technologies for APUs <b>2016</b> , 208-224		
12	SOFCCell, Stack and System Level <b>2016</b> , 304-320		
11	Power-to-Gas <b>2016</b> , 357-368		
10	Prozessketten zur Bereitstellung von Kraftstoffen aus Kohlendioxid und Wasserstoff. <i>Chemie-Ingenieur-Technik</i> , <b>2016</b> , 88, 1262-1262	0.8	
9	In Situ Imaging at Large-Scale Facilities <b>2012</b> , 493-519		
8	Brennstoffzellen ffi frie Mikte. <i>Chemie-Ingenieur-Technik</i> , <b>2007</b> , 79, 1332-1332	0.8	
7	Budget-cut: introduction to a budget based cutting-plane algorithm for capacity expansion models. <i>Optimization Letters</i> ,1	1.1	
6	Fuel Processing of Low-Sulfur Diesel for Fuel Cell Systems <b>2015</b> , 103-111		

#### LIST OF PUBLICATIONS

5 Hydrogen: An Alternative to Fossil Fuels?118-122

- Fuel Processing for Utilization in Fuel Cells **2016**, 173-216
- Markteintrittsstrategie ffl Power-to-Liquid-Kraftstoffe Techno-Ronomische Analyse eines Stand-Alone-Systems. *Chemie-Ingenieur-Technik*, **2018**, 90, 1144-1144

0.8

- Mobility Trends in Transport Sector Modeling. *Future Transportation*, **2022**, 2, 184-215
- Economics of Hydrogen **2022**, 75-102