Ruth Knibbe

List of Publications by Year
in descending order

75	3,433	172457	144013
papers	citations	29 h-index	57 g-index

76	76	76	3983
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Solid Oxide Electrolysis Cells: Degradation at High Current Densities. Journal of the Electrochemical Society, 2010, 157, B1209.	2.9	275
2	Recent Progress on Advanced Materials for Solidâ€Oxide Fuel Cells Operating Below 500 Â°C. Advanced Materials, 2017, 29, 1700132.	21.0	257
3	Review on areal capacities and long-term cycling performances of lithium sulfur battery at high sulfur loading. Energy Storage Materials, 2019, 18, 289-310.	18.0	231
4	Sandwichâ€Like Ultrathin TiS₂ Nanosheets Confined within N, S Codoped Porous Carbon as an Effective Polysulfide Promoter in Lithiumâ€Sulfur Batteries. Advanced Energy Materials, 2019, 9, 1901872.	19.5	186
5	Recent advances in separators to mitigate technical challenges associated with re-chargeable lithium sulfur batteries. Journal of Materials Chemistry A, 2019, 7, 6596-6615.	10.3	173
6	Hydrogen and synthetic fuel production using pressurized solid oxide electrolysis cells. International Journal of Hydrogen Energy, 2010, 35, 9544-9549.	7.1	172
7	Co-Electrolysis of Steam and Carbon Dioxide in Solid Oxide Cells. Journal of the Electrochemical Society, 2012, 159, F482-F489.	2.9	148
8	Cyclic Voltammetry in Lithiumâ€“Sulfur Batteriesâ€”Challenges and Opportunities. Energy Technology, 2019, 7, 1801001.	3.8	138
9	Cathodeâ€“Electrolyte Interfaces with CGO Barrier Layers in SOFC. Journal of the American Ceramic Society, 2010, 93, 2877-2883.	3.8	103
10	Corrosion stability of ferritic stainless steels for solid oxide electrolyser cell interconnects. Corrosion Science, 2010, 52, 3309-3320.	6.6	100
11	Solidâ€Oxide Fuel Cells: Recent Progress on Advanced Materials for Solidâ€Oxide Fuel Cells Operating Below 500 Â°C (Adv. Mater. 48/2017). Advanced Materials, 2017, 29, 1770345.	21.0	97
12	Biomimetic Sn₄P₃ Anchored on Carbon Nanotubes as an Anode for High-Performance Sodium-Ion Batteries. ACS Nano, 2020, 14, 8826-8837.	14.6	95
13	New composites of nanoparticle Cu (I) oxide and titania in a novel inorganic polymer (geopolymer) matrix for destruction of dyes and hazardous organic pollutants. Journal of Hazardous Materials, 2016, 318, 772-782.	12.4	91
14	Air electrodes and related degradation mechanisms in solid oxide electrolysis and reversible solid oxide cells. Renewable and Sustainable Energy Reviews, 2021, 143, 110918.	16.4	78
15	High Performance Cathodes for Solid Oxide Fuel Cells Prepared by Infiltration of La0.6Sr0.4CoO3â¯Î´ into Gd-Doped Ceria. Journal of the Electrochemical Society, 2011, 158, B650.	2.9	71
16	The role of functional materials to produce high areal capacity lithium sulfur battery. Journal of Energy Chemistry, 2020, 42, 195-209.	12.9	67
17	Durability of Solid Oxide Cells. Green, 2011, 1, .	0.4	63
18	Sn4P3@Porous carbon nanofiber as a self-supported anode for sodium-ion batteries. Journal of Power Sources, 2020, 461, 228116.	7.8	55

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19	Sc, Ge co-doping NASICON boosts solid-state sodium ion batteries' performance. Energy Storage Materials, 2021, 40, 282-291.	18.0	52
20	Separator coatings as efficient physical and chemical hosts of polysulfides for high-sulfur-loaded rechargeable lithiumâ€“sulfur batteries. Journal of Energy Chemistry, 2020, 44, 51-60.	12.9	47
21	Non-enzymatic glucose sensor based on copper oxide and multi-wall carbon nanotubes using PEDOT:PSS matrix. Synthetic Metals, 2018, 245, 160-166.	3.9	43
22	Hydrogen embrittlement of an automotive 1700 MPa martensitic advanced high-strength steel. Corrosion Science, 2020, 171, 108726.	6.6	42
23	In Situ Techniques for Developing Robust Liâ€“S Batteries. Small Methods, 2018, 2, 1800133.	8.6	41
24	Efficient dual layer interconnect coating for high temperature electrochemical devices. International Journal of Hydrogen Energy, 2012, 37, 14501-14510.	7.1	39
25	Synthesis and characterisation of macroporous Yttria Stabilised Zirconia (YSZ) using polystyrene spheres as templates. Microporous and Mesoporous Materials, 2009, 117, 395-401.	4.4	35
26	Enhancing Oxygen Reduction Reaction Activity and CO₂ Tolerance of Cathode for Low-Temperature Solid Oxide Fuel Cells by in Situ Formation of Carbonates. ACS Applied Materials & Interfaces, 2019, 11, 26909-26919.	8.0	35
27	A porous yttria-stabilized zirconia layer to eliminate the delamination of air electrode in solid oxide electrolysis cells. Journal of Power Sources, 2017, 359, 104-110.	7.8	33
28	Oriented nanoporous MOFs to mitigate polysulfides migration in lithium-sulfur batteries. Nano Energy, 2020, 75, 105009.	16.0	33
29	Cation inter-diffusion between LaMnO3 and LaCoO3 materials. Solid State Ionics, 2011, 202, 6-13.	2.7	32
30	Multifunctional Effects of Sulfonyl-Anchored, Dual-Doped Multilayered Graphene for High Areal Capacity Lithium Sulfur Batteries. ACS Central Science, 2019, 5, 1946-1958.	11.3	29
31	Catalystâ€“Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO₂ Reduction. ChemSusChem, 2020, 13, 304-311.	6.8	29
32	Nanoconfined Topochemical Conversion from MXene to Ultrathin Nonâ€Layered TiN Nanomesh toward Superior Electrocatalysts for Lithiumâ€Sulfur Batteries. Small, 2021, 17, e2101360.	10.0	25
33	Optimizing solid oxide fuel cell cathode processing route for intermediate temperature operation. Applied Energy, 2013, 104, 984-991.	10.1	24
34	Zn Electrodeposition by an In Situ Electrochemical Liquid Phase Transmission Electron Microscope. Journal of Physical Chemistry Letters, 2021, 12, 913-918.	4.6	24
35	Enhanced Safety and Performance of High-Voltage Solid-State Sodium Battery through Trilayer, Multifunctional Electrolyte Design. Energy Storage Materials, 2021, 41, 8-13.	18.0	23
36	Electrochemical characterization of La0.6Ca0.4Fe0.8Ni0.2O3â^Î´ perovskite cathode forÂIT-SOFC. Journal of Power Sources, 2013, 239, 196-200.	7.8	22

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37	Oxidation in ceria infiltrated metal supported SOFCs â€“ A TEM investigation. Journal of Power Sources, 2013, 228, 75-82.	7.8	22
38	Prediction of Mechanical Properties of Wrought Aluminium Alloys Using Feature Engineering Assisted Machine Learning Approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2873-2884.	2.2	22
39	Electrochemical Characterization of Planar Anode Supported SOFC with Strontium-Doped Lanthanum Cobalt Oxide Cathodes. ECS Transactions, 2008, 13, 285-299.	0.5	21
40	Electrochemical characterisation of solid oxide cell electrodes for hydrogen production. Journal of Power Sources, 2011, 196, 4396-4403.	7.8	21
41	Impact of Micropores and Dopants to Mitigate Lithium Polysulfides Shuttle over High Surface Area of ZIF-8 Derived Nanoporous Carbons. ACS Applied Energy Materials, 2020, 3, 5523-5532.	5.1	21
42	Hydrogen-induced fast fracture in notched 1500 and 1700 MPa class automotive martensitic advanced high-strength steel. Corrosion Science, 2021, 188, 109550.	6.6	21
43	Improved oxidation resistance of ferritic steels with LSM coating for high temperature electrochemical applications. International Journal of Hydrogen Energy, 2012, 37, 8087-8094.	7.1	20
44	Effect of plastic strain damage on the hydrogen embrittlement of a dual-phase (DP) and a quenching and partitioning (Q&P) advanced high-strength steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 785, 139343.	5.6	20
45	Modeling Degradation in SOEC Impedance Spectra. Journal of the Electrochemical Society, 2013, 160, F244-F250.	2.9	19
46	Porous Scandia-Stabilized Zirconia Layer for Enhanced Performance of Reversible Solid Oxide Cells. ACS Applied Materials & Interfaces, 2018, 10, 25295-25302.	8.0	18
47	Hydrogen fracture maps for sheared-edge-controlled hydrogen-delayed fracture of 1180 MPa advanced high-strength steels. Corrosion Science, 2021, 184, 109360.	6.6	18
48	Stable Interfaces in a Sodium Metal-Free, Solid-State Sodium-Ion Battery with Gradient Composite Electrolyte. ACS Applied Materials & Interfaces, 2021, 13, 39355-39362.	8.0	17
49	ZIF-8 derived hollow carbon to trap polysulfides for high performance lithiumâ€“sulfur batteries. Nanoscale, 2021, 13, 11086-11092.	5.6	16
50	Oxygen Deficiency, Stacking Faults and Calcium Substitution in MOD YBCO Coated Conductors. IEEE Transactions on Applied Superconductivity, 2013, 23, 7200205-7200205.	1.7	15
51	An Integrated Strategy towards Enhanced Performance of the Lithiumâ€“Sulfur Battery and its Fading Mechanism. Chemistry - A European Journal, 2018, 24, 18544-18550.	3.3	14
52	Enhanced low-temperature critical current by reduction of stacking faults in REBCO coated conductors. Superconductor Science and Technology, 2017, 30, 074005.	3.5	13
53	Structure property relationships in a nanoparticle-free SmBCO coated conductor. Superconductor Science and Technology, 2016, 29, 065006.	3.5	11
54	Evaluation of SrCo0.8Nb0.2O3-Î´, SrCo0.8Ta0.2O3-Î´ and SrCo0.8Nb0.1Ta0.1O3-Î´ as air electrode materials for solid oxide electrolysis and reversible solid oxide cells. Electrochimica Acta, 2019, 321, 134654.	5.2	10

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55	Effect of shearing prestrain on the hydrogen embrittlement of 1180ÂMPa grade martensitic advanced high-strength steel. Corrosion Science, 2022, 199, 110170.	6.6	10
56	Effect of alumina additions on the anode | electrolyte interface in solid oxide fuel cells. Journal of Power Sources, 2008, 179, 511-519.	7.8	9
57	Relating Critical Currents to Defect Populations in Superconductors. IEEE Transactions on Applied Superconductivity, 2013, 23, 8001705-8001705.	1.7	9
58	Unveiling Lithium Roles in Cobaltâ€Free Cathodes for Efficient Oxygen Reduction Reaction below 600â€‰Â°C. ChemElectroChem, 2019, 6, 5340-5348.	3.4	8
59	In Operando Closed-cell Transmission Electron Microscopy for Rechargeable Battery Characterization: Scientific Breakthroughs and Practical Limitations. Nano Energy, 2022, 96, 107083.	16.0	7
60	Effect of alumina additions in YSZ on the microstructure and degradation of the LSMâ€“YSZ interface. Solid State Ionics, 2009, 180, 984-989.	2.7	6
61	New Insights into the Degradation Behavior of Air Electrodes during Solid Oxide Electrolysis and Reversible Solid Oxide Cell Operation. Energy Technology, 2020, 8, 2000241.	3.8	6
62	A Study of Membrane Impact on Spatial Resolution of Liquid In Situ Transmission Electron Microscope. Microscopy and Microanalysis, 2020, 26, 126-133.	0.4	6
63	Charge Storage Behaviour of Î±â€MoO₃ in Aqueous Electrolytes â€“ Effect of Charge Density of Electrolyte Cations. ChemElectroChem, 2022, 9, .	3.4	5
64	Isotropic and Anisotropic Flux Pinning Induced by Heavy-Ion Irradiation. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	5
65	The Role of Stacking Faults in the Enhancement of the a-b Plane Peak in Silver Ion-Irradiated Commercial MOD REBCO Wires. IEEE Transactions on Applied Superconductivity, 2022, 32, 1-5.	1.7	5
66	Effect of cold deformation on the hydrogen permeation in a dual-phase advanced high-strength steel. Electrochimica Acta, 2022, 424, 140619.	5.2	5
67	Ultrahigh Electron Emissive Carbon Nanotubes with Nano-sized RuO2 Particles Deposition. Journal of Nanoparticle Research, 2007, 9, 1201-1204.	1.9	4
68	Origin of Polarization Losses in Solid Oxide Electrolysis Cells under High Current Density. ECS Transactions, 2010, 28, 77-87.	0.5	4
69	Influence of hydrogen on the Sâ€“N fatigue of DP1180 advanced high-strength steel. Corrosion Science, 2022, 205, 110465.	6.6	4
70	Analytical electron microscopy of proton exchange membrane fuel cells. Solid State Ionics, 2006, 177, 1649-1654.	2.7	3
71	Hydrogen-induced delayed fracture of a 1180â€MPa martensitic advanced high-strength steel under U-bend loading. Materials Today Communications, 2021, 26, 101887.	1.9	3
72	Glassâ€Phase Movement in Yttriaâ€Stabilized Zirconia/Alumina Composites. Journal of the American Ceramic Society, 2010, 93, 1494-1500.	3.8	2

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73	Catalystâ€“Electrolyte Interactions in Aqueous Reline Solutions for Highly Selective Electrochemical CO 2 Reduction. ChemSusChem, 2020, 13, 282-282.	6.8	2
74	Cobaltâ€doped Cu ₆ Sn ₅ lithiumâ€ion battery anodes with enhanced electrochemical properties. Nano Select, 0, , .	3.7	2
75	Investigation of Failure Mechanisms in Ti Containing Brazing Alloys Used in SOFC/SOEC Environments. , 2010, , .		1