Emiliana Fabbri

List of Publications by Year
in descending order

109 papers	10,735 citations	34016 52 h-index	30848 102 g-index
114 all docs	114 docs citations	114 times ranked	9818 citing authors

#	Article	IF	Citations
1	Developments and perspectives of oxide-based catalysts for the oxygen evolution reaction. Catalysis Science and Technology, 2014, 4, 3800-3821.	2.1	1,006
2	Materials challenges toward proton-conducting oxide fuel cells: a critical review. Chemical Society Reviews, 2010, 39, 4355.	18.7	731
3	Dynamic surface self-reconstruction is the key of highly active perovskite nano-electrocatalysts for water splitting. Nature Materials, 2017, 16, 925-931.	13.3	696
4	High proton conduction in grain-boundary-free yttrium-doped barium zirconate films grown by pulsed laser deposition. Nature Materials, 2010, 9, 846-852.	13.3	472
5	Tailoring the chemical stability of Ba(Ce0.8â˜'xZrx)Y0.2O3â˜'Î´ protonic conductors for Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs). Solid State Ionics, 2008, 179, 558-564.	1.3	454
6	Towards the Next Generation of Solid Oxide Fuel Cells Operating Below 600 Â°C with Chemically Stable Protonâ€Conducting Electrolytes. Advanced Materials, 2012, 24, 195-208.	11.1	451
7	Iridium Oxide for the Oxygen Evolution Reaction: Correlation between Particle Size, Morphology, and the Surface Hydroxo Layer from Operando XAS. Chemistry of Materials, 2016, 28, 6591-6604.	3.2	347
8	Oxygen Evolution Reactionâ€"The Enigma in Water Electrolysis. ACS Catalysis, 2018, 8, 9765-9774.	5.5	345
9	Thermodynamic explanation of the universal correlation between oxygen evolution activity and corrosion of oxide catalysts. Scientific Reports, 2015, 5, 12167.	1.6	309
10	IrO₂-TiO₂: A High-Surface-Area, Active, and Stable Electrocatalyst for the Oxygen Evolution Reaction. ACS Catalysis, 2017, 7, 2346-2352.	5.5	264
11	Oxygen Evolution Reaction on La_{1â€"<i>x</i>}Sr_{<i>x</i>}CoO₃ Perovskites: A Combined Experimental and Theoretical Study of Their Structural, Electronic, and Electrochemical Properties. Chemistry of Materials, 2015, 27, 7662-7672.	3.2	259
12	Functional Role of Fe-Doping in Co-Based Perovskite Oxide Catalysts for Oxygen Evolution Reaction. Journal of the American Chemical Society, 2019, 141, 5231-5240.	6.6	250
13	Chemically Stable Pr and Y Coâ€Doped Barium Zirconate Electrolytes with High Proton Conductivity for Intermediateâ€Temperature Solid Oxide Fuel Cells. Advanced Functional Materials, 2011, 21, 158-166.	7.8	203
14	Does the increase in Y-dopant concentration improve the proton conductivity of BaZr1â˜'xYxO3â˜'Î´ fuel cell electrolytes?. Solid State Ionics, 2010, 181, 1043-1051.	1.3	173
15	Highly Active and Stable Iridium Pyrochlores for Oxygen Evolution Reaction. Chemistry of Materials, 2017, 29, 5182-5191.	3.2	172
16	High-performance composite cathodes with tailored mixed conductivity for intermediate temperature solid oxide fuel cells using proton conducting electrolytes. Energy and Environmental Science, 2011, 4, 4984.	15.6	147
17	Room-Temperature Giant Persistent Photoconductivity in SrTiO₃/LaAlO₃ Heterostructures. ACS Nano, 2012, 6, 1278-1283.	7.3	141
18	Determination of the Electrochemically Active Surface Area of Metal-Oxide Supported Platinum Catalyst. Journal of the Electrochemical Society, 2014, 161, H121-H128.	1.3	140

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19	Ionic conductivity in oxide heterostructures: the role of interfaces. Science and Technology of Advanced Materials, 2010, 11, 054503.	2.8	137
20	Lowering grain boundary resistance of BaZr_{0.8}Y_{0.2}O_{3âˆ'Î´}with LiNO₃sintering-aid improves proton conductivity for fuel cell operation. Physical Chemistry Chemical Physics, 2011, 13, 7692-7700.	1.3	121
21	Sinteractive anodic powders improve densification and electrochemical properties of BaZr0.8Y0.2O3âˆ'Î´ electrolyte films for anode-supported solid oxide fuel cells. Energy and Environmental Science, 2011, 4, 1352.	15.6	118
22	Electrode materials: a challenge for the exploitation of protonic solid oxide fuel cells. Science and Technology of Advanced Materials, 2010, 11, 044301.	2.8	116
23	Perovskite Oxide Based Electrodes for the Oxygen Reduction and Evolution Reactions: The Underlying Mechanism. ACS Catalysis, 2021, 11, 3094-3114.	5.5	115
24	Composite Cathodes for Proton Conducting Electrolytes. Fuel Cells, 2009, 9, 128-138.	1.5	113
25	Unraveling Thermodynamics, Stability, and Oxygen Evolution Activity of Strontium Ruthenium Perovskite Oxide. ACS Catalysis, 2017, 7, 3245-3256.	5.5	113
26	Composite Electrode Boosts the Activity of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3-Î´} Perovskite and Carbon toward Oxygen Reduction in Alkaline Media. ACS Catalysis, 2014, 4, 1061-1070.	5.5	111
27	Chemically stable anode-supported solid oxide fuel cells based on Y-doped barium zirconate thin films having improved performance. Electrochemistry Communications, 2010, 12, 977-980.	2.3	107
28	The Effect of Platinum Loading and Surface Morphology on Oxygen Reduction Activity. Electrocatalysis, 2016, 7, 287-296.	1.5	106
29	Interfacial effects on the catalysis of the hydrogen evolution, oxygen evolution and CO2-reduction reactions for (co-)electrolyzer development. Nano Energy, 2016, 29, 4-28.	8.2	104
30	Superior Bifunctional Electrocatalytic Activity of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3â€Î´}/Carbon Composite Electrodes: Insight into the Local Electronic Structure. Advanced Energy Materials, 2015, 5, 1402033.	10.2	102
31	Design and fabrication of a chemically-stable proton conductor bilayer electrolyte for intermediate temperature solid oxide fuel cells (IT-SOFCs). Energy and Environmental Science, 2008, 1, 355.	15.6	98
32	Oxygen Evolution Reaction on Perovskites: A Multieffect Descriptor Study Combining Experimental and Theoretical Methods. ACS Catalysis, 2018, 8, 9567-9578.	5.5	98
33	Effect of Dopantâ€"Host Ionic Radii Mismatch on Acceptor-Doped Barium Zirconate Microstructure and Proton Conductivity. Journal of Physical Chemistry C, 2017, 121, 9739-9747.	1.5	95
34	Effect of anode functional layer on the performance of proton-conducting solid oxide fuel cells (SOFCs). Electrochemistry Communications, 2012, 16, 37-40.	2.3	91
35	<i>Operando</i> X-ray characterization of high surface area iridium oxides to decouple their activity losses for the oxygen evolution reaction. Energy and Environmental Science, 2019, 12, 3038-3052.	15.6	90
36	Design of BaZr_{0.8}Y_{0.2}O_{3â€"Î´} Protonic Conductor to Improve the Electrochemical Performance in Intermediate Temperature Solid Oxide Fuel Cells (ITâ€SOFCs). Fuel Cells, 2008, 8, 69-76.	1.5	88

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37	Electrocatalysis of Perovskites: The Influence of Carbon on the Oxygen Evolution Activity. Journal of the Electrochemical Society, 2015, 162, F579-F586.	1.3	88
38	Tensile Lattice Distortion Does Not Affect Oxygen Transport in Yttria-Stabilized Zirconiaâ€“CeO₂ Heterointerfaces. ACS Nano, 2012, 6, 10524-10534.	7.3	84
39	A novel ionic diffusion strategy to fabricate high-performance anode-supported solid oxidefuel cells (SOFCs) with proton-conducting Y-doped BaZrO₃films. Energy and Environmental Science, 2011, 4, 409-412.	15.6	83
40	Electrochemical Properties and Intermediateâ€Temperature Fuel Cell Performance of Dense Yttriumâ€Doped Barium Zirconate with Calcium Addition. Journal of the American Ceramic Society, 2012, 95, 627-635.	1.9	81
41	Pt nanoparticles supported on Sb-doped SnO₂ porous structures: developments and issues. Physical Chemistry Chemical Physics, 2014, 16, 13672-13681.	1.3	78
42	Electrochemical Flow-Cell Setup for In Situ X-ray Investigations. Journal of the Electrochemical Society, 2016, 163, H906-H912.	1.3	71
43	Operando X-ray absorption spectroscopy: A powerful tool toward water splitting catalyst development. Current Opinion in Electrochemistry, 2017, 5, 20-26.	2.5	69
44	Sinteractivity, proton conductivity and chemical stability of BaZr0.7In0.3O3-Î´ for solid oxide fuel cells (SOFCs). Solid State Ionics, 2011, 196, 59-64.	1.3	66
45	Tailoring mixed proton-electronic conductivity of BaZrO3 by Y and Pr co-doping for cathode application in protonic SOFCs. Solid State Ionics, 2011, 202, 30-35.	1.3	65
46	Scalable Oxygenâ€Ion Transport Kinetics in Metalâ€Oxide Films: Impact of Thermally Induced Lattice Compaction in Acceptor Doped Ceria Films. Advanced Functional Materials, 2014, 24, 1562-1574.	7.8	65
47	Solid oxide fuel cells with proton-conducting La0.99Ca0.01NbO4 electrolyte. Electrochimica Acta, 2018, 260, 748-754.	2.6	64
48	Highly Active Nanoperovskite Catalysts for Oxygen Evolution Reaction: Insights into Activity and Stability of Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{2+Î´} and PrBaCo₂O_{5+Î´}. Advanced Functional Materials, 2018, 28, 1804355.	7.8	63
49	Design and Synthesis of Ir/Ru Pyrochlore Catalysts for the Oxygen Evolution Reaction Based on Their Bulk Thermodynamic Properties. ACS Applied Materials & Interfaces, 2019, 11, 37748-37760.	4.0	61
50	BaZr0.8Y0.2O3âˆ'Î´-NiO Composite Anodic Powders for Proton-Conducting SOFCs Prepared by a Combustion Method. Journal of the Electrochemical Society, 2011, 158, B797.	1.3	59
51	Performance of Different Carbon Electrode Materials: Insights into Stability and Degradation under Real Vanadium Redox Flow Battery Operating Conditions. Journal of the Electrochemical Society, 2017, 164, A1608-A1615.	1.3	57
52	Investigating the Role of Strain toward the Oxygen Reduction Activity on Model Thin Film Pt Catalysts. ACS Catalysis, 2016, 6, 7566-7576.	5.5	56
53	Correlation between Oxygen Vacancies and Oxygen Evolution Reaction Activity for a Model Electrode: PrBaCo₂O_{5+<i>Î´</i>}. Angewandte Chemie - International Edition, 2021, 60, 14609-14619.	7.2	54
54	Mixed Protonic/Electronic Conductor Cathodes for Intermediate Temperature SOFCs Based on Proton Conducting Electrolytes. Journal of the Electrochemical Society, 2009, 156, B38.	1.3	48

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55	<i>Operando</i>X-ray absorption investigations into the role of Fe in the electrochemical stability and oxygen evolution activity of Ni_{1â^'x}Fe_xO_ynanoparticles. Journal of Materials Chemistry A, 2018, 6, 24534-24549.	5.2	45
56	Probing the solidâ€"liquid interface with tender x rays: A new ambient-pressure x-ray photoelectron spectroscopy endstation at the Swiss Light Source. Review of Scientific Instruments, 2020, 91, 023103.	0.6	45
57	Co/Fe Oxyhydroxides Supported on Perovskite Oxides as Oxygen Evolution Reaction Catalyst Systems. ACS Applied Materials & Interfaces, 2019, 11, 34787-34795.	4.0	43
58	Oxygen evolution reaction activity and underlying mechanism of perovskite electrocatalysts at different pH. Materials Advances, 2021, 2, 345-355.	2.6	42
59	Ba_{0.5}Sr_{0.5}Co_{0.8}Fe_{0.2}O_{3â€Î´} Perovskite Activity towards the Oxygen Reduction Reaction in Alkaline Media. ChemElectroChem, 2014, 1, 338-342.	1.7	39
60	LaTiO_xN_y Thin Film Model Systems for Photocatalytic Water Splitting: Physicochemical Evolution of the Solidâ€"Liquid Interface and the Role of the Crystallographic Orientation. Advanced Functional Materials, 2017, 27, 1605690.	7.8	38
61	Strontium and iron-doped barium cobaltite prepared by solution combustion synthesis: exploring a mixed-fuel approach for tailored intermediate temperature solid oxide fuel cell cathode materials. Materials for Renewable and Sustainable Energy, 2013, 2, 1.	1.5	36
62	Catalyzed SnO₂ Thin Films: Theoretical and Experimental Insights into Fabrication and Electrocatalytic Properties. Journal of Physical Chemistry C, 2014, 118, 11292-11302.	1.5	35
63	Vanadium (V) reduction reaction on modified glassy carbon electrodes â€" Role of oxygen functionalities and microstructure. Carbon, 2016, 109, 472-478.	5.4	33
64	Novel Ba0.5Sr0.5(Co0.8Fe0.2)1â^'xTixO3â^'Î´ (x=0, 0.05, and 0.1) cathode materials for proton-conducting solid oxide fuel cells. Solid State Ionics, 2012, 214, 1-5.	1.3	32
65	Co-electrolysis of CO2 and H2O: From electrode reactions to cell-level development. Current Opinion in Electrochemistry, 2020, 23, 89-95.	2.5	32
66	Electrode tailoring improves the intermediate temperature performance of solid oxide fuel cells based on a Y and Pr co-doped barium zirconate proton conducting electrolyte. RSC Advances, 2011, 1, 1183.	1.7	31
67	Stabilization of Pt Nanoparticles Due to Electrochemical Transistor Switching of Oxide Support Conductivity. Chemistry of Materials, 2017, 29, 2831-2843.	3.2	29
68	Low-temperature solid-oxide fuel cells based on proton-conducting electrolytes. MRS Bulletin, 2014, 39, 792-797.	1.7	28
69	Understanding the Influence of Carbon on the Oxygen Reduction and Evolution Activities of BSCF/Carbon Composite Electrodes in Alkaline Electrolyte. ECS Transactions, 2014, 58, 9-18.	0.3	26
70	Influence of Carbon Material Properties on Activity and Stability of the Negative Electrode in Vanadium Redox Flow Batteries: A Model Electrode Study. ACS Applied Energy Materials, 2018, 1, 1166-1174.	2.5	25
71	Facile deposition of Pt nanoparticles on Sb-doped SnO₂ support with outstanding active surface area for the oxygen reduction reaction. Catalysis Science and Technology, 2018, 8, 2672-2685.	2.1	25
72	Fe-Doping in Double Perovskite PrBaCo2(1-x)Fe2xO6-Î´: Insights into Structural and Electronic Effects to Enhance Oxygen Evolution Catalyst Stability. Catalysts, 2019, 9, 263.	1.6	25

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73	Interface Effects on the Ionic Conductivity of Doped Ceriaâ€“Yttria-Stabilized Zirconia Heterostructures. ACS Applied Materials & Interfaces, 2018, 10, 14160-14169.	4.0	22
74	The Effect of Platinum Nanoparticle Distribution on Oxygen Electroreduction Activity and Selectivity. ChemCatChem, 2014, 6, 1410-1418.	1.8	20
75	Influence of surface oxygen groups on V(II) oxidation reaction kinetics. Electrochemistry Communications, 2017, 75, 13-16.	2.3	20
76	Composite Ormosil/Nafion Membranes as Electrolytes for Direct Methanol Fuel Cells. Journal of the Electrochemical Society, 2007, 154, B1148.	1.3	19
77	Particle-Support Interferences in Small-Angle X-Ray Scattering from Supported-Catalyst Materials. Physical Review Applied, 2015, 3, .	1.5	19
78	Boosting Pt oxygen reduction reaction activity by tuning the tin oxide support. Electrochemistry Communications, 2017, 83, 90-95.	2.3	19
79	Growth mechanisms of ceria- and zirconia-based epitaxial thin films and hetero-structures grown by pulsed laser deposition. Materials for Renewable and Sustainable Energy, 2013, 2, 1.	1.5	18
80	Impact of Support Physicochemical Properties on the CO Oxidation and the Oxygen Reduction Reaction Activity of Pt/SnO₂ Electrocatalysts. Journal of Physical Chemistry C, 2018, 122, 4739-4746.	1.5	18
81	Advanced Cathode Materials for Polymer Electrolyte Fuel Cells Based on Pt/ Metal Oxides: From Model Electrodes to Catalyst Systems. Chimia, 2014, 68, 217.	0.3	17
82	Synergistic effects in oxygen evolution activity of mixed iridium-ruthenium pyrochlores. Electrochimica Acta, 2021, 366, 137327.	2.6	17
83	A novel single chamber solid oxide fuel cell based on chemically stable thin films of Y-doped BaZrO3 proton conducting electrolyte. Energy and Environmental Science, 2010, 3, 618.	15.6	16
84	Probing the bulk ionic conductivity by thin film hetero-epitaxial engineering. Science and Technology of Advanced Materials, 2015, 16, 015001.	2.8	16
85	Surface Segregation Acts as Surface Engineering for the Oxygen Evolution Reaction on Perovskite Oxides in Alkaline Media. Chemistry of Materials, 2020, 32, 5256-5263.	3.2	16
86	Tuning the Surface Electrochemistry by Strained Epitaxial Pt Thin Film Model Electrodes Prepared by Pulsed Laser Deposition. Advanced Materials Interfaces, 2016, 3, 1600222.	1.9	15
87	(Invited) Unraveling the Oxygen Reduction Reaction Mechanism and Activity of d-Band Perovskite Electrocatalysts for Low Temperature Alkaline Fuel Cells. ECS Transactions, 2014, 64, 1081-1093.	0.3	13
88	Durable Oxide-Based Catalysts for Application as Cathode Materials in Polymer Electrolyte Fuel Cells (PEFCs). ECS Transactions, 2013, 50, 9-17.	0.3	12
89	Direct evidence of cobalt oxyhydroxide formation on a La_{0.2}Sr_{0.8}CoO₃ perovskite water splitting catalyst. Journal of Materials Chemistry A, 2022, 10, 2434-2444.	5.2	12
90	Tailoring phase stability and electrical conductivity of Sr0.02La0.98Nb1â€“xTaxO4 for intermediate temperature fuel cell proton conducting electrolytes. Solid State Ionics, 2012, 216, 6-10.	1.3	11

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91	Tuning the Co Oxidation State in Ba0.5Sr0.5Co0.8Fe0.2O3-Î´ by Flame Spray Synthesis Towards High Oxygen Evolution Reaction Activity. Catalysts, 2020, 10, 984.	1.6	11
92	Iridium-Titanium Oxide as Support for Pt Catalyst in PEFC Cathodes. ECS Transactions, 2013, 58, 1835-1841.	0.3	10
93	Silicone Nanofilament Supported Nickel Oxide: A New Concept for Oxygen Evolution Catalysts in Water Electrolyzers. Advanced Materials Interfaces, 2015, 2, 1500216.	1.9	10
94	Electrochemical Flow-Cell Setup for In Situ X-ray Investigations. Journal of the Electrochemical Society, 2016, 163, H913-H920.	1.3	10
95	BaZrxY1-xO3-d and BaCe1-x-zZrxYzO3-d Proton Conductors For Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs). ECS Transactions, 2007, 7, 2337-2342.	0.3	7
96	Silicone Nanofilament-Supported Mixed Nickel-Metal Oxides for Alkaline Water Electrolysis. Journal of the Electrochemical Society, 2017, 164, F203-F208.	1.3	7
97	Enlightening the journey of metal-organic framework (derived) catalysts during the oxygen evolution reaction in alkaline media via operando X-ray absorption spectroscopy. Current Opinion in Electrochemistry, 2021, 30, 100845.	2.5	5
98	Improving the Performance of High Temperature Protonic Conductor (HTPC) Electrolytes for Solid Oxide Fuel Cell (SOFC) Applications. Key Engineering Materials, 0, 421-422, 336-339.	0.4	3
99	Pulsed Laser Deposition of Superlattices Based on Ceria and Zirconia. ECS Transactions, 2011, 35, 1125-1130.	0.3	3
100	Correlation between Oxygen Vacancies and Oxygen Evolution Reaction Activity for a Model Electrode: PrBaCo 2 O 5+ Î´. Angewandte Chemie, 2021, 133, 14730-14740.	1.6	3
101	Exploring Highly Yttrium Doped Barium Zirconate Proton Conductor Electrolytes for Application in Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs). ECS Transactions, 2009, 25, 1745-1752.	0.3	2
102	Exploring Mixed Protonic/Electronic Conducting Oxides as Cathode Materials for Intermediate Temperature SOFCs Based on Proton Conducting Electrolytes. ECS Transactions, 2011, 35, 2305-2311.	0.3	2
103	BaCe1-x-yZrxYyO3-d Protonic Conductor for Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs). ECS Transactions, 2007, 6, 23-28.	0.3	1
104	Single Chamber Solid Oxide Fuel Cells (SC-SOFCs) based on a Proton Conducting Electrolyte. ECS Transactions, 2009, 25, 1001-1006.	0.3	1
105	Soft Chemistry Routes for the Synthesis of Sr0.02La0.98Nb0.6Ta0.4O4 Proton Conductor. Journal of the Electrochemical Society, 2011, 158, B1485.	1.3	1
106	Investigation of Hydrogen-Like Muonium States in Nb-Doped SnO₂ Films. , 2018, , .		1
107	Synthesis and Characterization of BaZr0.8Y0.2O3 Protonic Conductor for Intermediate Temperature Solid Oxide Fuel Cells (IT-SOFCs). Materials Research Society Symposia Proceedings, 2006, 972, 1.	0.1	0
108	Soft Chemistry Routes for the Synthesis of Sr0.02La0.98Nb0.6Ta0.4O4 Proton Conductor. ECS Transactions, 2011, 35, 1235-1241.	0.3	0

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109	Performance of Solid Oxide Fuel Cells with In-Doped BaZrO3 Electrolyte Films on Different Anode Substrates. ECS Transactions, 2011, 35, 797-804.	0.3	0