Ch Laberty-Robert

List of Publications by Year
in descending order

121 papers	5,082 citations	109321 35 h-index	95266 68 g-index
124 all docs	124 docs citations	124 times ranked	8160 citing authors

#	Article	IF	Citations
1	Design and properties of functional hybrid organicâ€“inorganic membranes for fuel cells. Chemical Society Reviews, 2011, 40, 961.	38.1	473
2	Modification of Al current collector surface by solâ€“gel deposit for carbonâ€“carbon supercapacitor applications. Electrochimica Acta, 2004, 49, 905-912.	5.2	377
3	High power density electrodes for Carbon supercapacitor applications. Electrochimica Acta, 2005, 50, 4174-4181.	5.2	327
4	â€œChimie douceâ€: A land of opportunities for the designed construction of functional inorganic and hybrid organic-inorganic nanomaterials. Comptes Rendus Chimie, 2010, 13, 3-39.	0.5	270
5	Solâ^'Gel-Derived Ceria Nanoarchitectures:â€‰ Synthesis, Characterization, and Electrical Properties. Chemistry of Materials, 2006, 18, 50-58.	6.7	219
6	Hybrid materials science: a promised land for the integrative design of multifunctional materials. Nanoscale, 2014, 6, 6267-6292.	5.6	168
7	Preparation and characterization of La1â€“xSrxMnO3+Î´ (0â©½xâ©½0.6) powder by solâ€“gel processing. Solid State Sciences, 2002, 4, 125-133.	3.2	164
8	Molecular Engineering of Functional Inorganic and Hybrid Materials. Chemistry of Materials, 2014, 26, 221-238.	6.7	147
9	Morphological and Structural Evolution of Co₃O₄ Nanoparticles Revealed by in Situ Electrochemical Transmission Electron Microscopy during Electrocatalytic Water Oxidation. ACS Nano, 2019, 13, 11372-11381.	14.6	140
10	Phosphate Ion Functionalization of Perovskite Surfaces for Enhanced Oxygen Evolution Reaction. Journal of Physical Chemistry Letters, 2017, 8, 3466-3472.	4.6	109
11	Powder synthesis of nanocrystalline ZrO2â€“8%Y2O3 via a polymerization route. Materials Research Bulletin, 2001, 36, 2083-2101.	5.2	98
12	Dense yttria stabilized zirconia: sintering and microstructure. Ceramics International, 2003, 29, 151-158.	4.8	89
13	A H2-evolving photocathode based on direct sensitization of MoS3 with an organic photovoltaic cell. Energy and Environmental Science, 2013, 6, 2706.	30.8	83
14	Microwave-assisted reactive sintering and lithium ion conductivity of Li1.3Al0.3Ti1.7(PO4)3 solid electrolyte. Journal of Power Sources, 2018, 378, 48-52.	7.8	77
15	Ionic Nanowires at 600â€‰Â°C: Using Nanoarchitecture to Optimize Electrical Transport in Nanocrystalline Gadolinium-Doped Ceria. Advanced Materials, 2007, 19, 1734-1739.	21.0	68
16	Mesoporous thin film WO₃ photoanode for photoelectrochemical water splitting: a solâ€“gel dip coating approach. Sustainable Energy and Fuels, 2017, 1, 145-153.	4.9	65
17	New Fe₂TiO₅-based nanoheterostructured mesoporous photoanodes with improved visible light photoresponses. Journal of Materials Chemistry A, 2014, 2, 6567-6577.	10.3	59
18	Mesoporous Î±-Fe2O3 thin films synthesized via the solâ€“gel process for light-driven water oxidation. Physical Chemistry Chemical Physics, 2012, 14, 13224.	2.8	55

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19	Synthesis by solâ€“gel route of oxyapatite powders for dense ceramics: Applications as electrolytes for solid oxide fuel cells. Journal of the European Ceramic Society, 2005, 25, 2665-2668.	5.7	53
20	Original Fuelâ€Cell Membranes from Crosslinked Terpolymers via a â€œSolâ€“gelâ€•Strategy. Advanced Functional Materials, 2010, 20, 1090-1098.	14.9	53
21	Synthesis and Electrochemical Performance of the Orthorhombic Li₂Fe(SO₄)₂ Polymorph for Li-Ion Batteries. Chemistry of Materials, 2014, 26, 4178-4189.	6.7	53
22	Synthesis of La9.33Si6O26 Poreâ€“Solid Nanoarchitectures via Epoxide-Driven Solâ€“Gel Chemistry. Advanced Materials, 2006, 18, 615-618.	21.0	52
23	Capillarity-induced folds fuel extreme shape changes in thin wicked membranes. Science, 2018, 360, 296-299.	12.6	50
24	New Insights into Pseudocapacitive Charge-Storage Mechanisms in Li-Birnessite Type MnO₂ Monitored by Fast Quartz Crystal Microbalance Methods. Journal of Physical Chemistry C, 2014, 118, 26551-26559.	3.1	49
25	Room-Temperature Synthesis of Iron-Doped Anatase TiO₂ for Lithium-Ion Batteries and Photocatalysis. Inorganic Chemistry, 2014, 53, 10129-10139.	4.0	49
26	Lithium Intercalation in Anatase Titanium Vacancies and the Role of Local Anionic Environment. Chemistry of Materials, 2018, 30, 3078-3089.	6.7	49
27	Thick YSZ films prepared via a modified solâ€“gel route: Thickness control (8â€“80Î¼m). Journal of the European Ceramic Society, 2006, 26, 3153-3160.	5.7	47
28	Synthesis of YSZ powders by the sol-gel method: surfactant effects on the morphology. Solid State Sciences, 2002, 4, 1053-1059.	3.2	46
29	A composite solâ€“gel process to prepare a YSZ electrolyte for Solid Oxide Fuel Cells. Journal of Power Sources, 2012, 206, 77-83.	7.8	45
30	Effect of anode polarization on biofilm formation and electron transfer in Shewanella oneidensis /graphite felt microbial fuel cells. Bioelectrochemistry, 2018, 120, 1-9.	4.6	44
31	Thick films of YSZ electrolytes by dip-coating process. Journal of the European Ceramic Society, 2005, 25, 2643-2646.	5.7	43
32	Shedding light on the light-driven lithium ion de-insertion reaction: towards the design of a photo-rechargeable battery. Journal of Materials Chemistry A, 2017, 5, 5927-5933.	10.3	43
33	Microbial diversity involved in iron and cryptic sulfur cycling in the ferruginous, low-sulfate waters of Lake Pavin. PLoS ONE, 2019, 14, e0212787.	2.5	43
34	Composition and porosity graded La2â^'xNiO4+Î´ (xâ‰¥0) interlayers for SOFC: Control of the microstructure via a solâ€“gel process. Journal of Power Sources, 2006, 156, 33-38.	7.8	40
35	Design, Synthesis, Structural and Textural Characterization, and Electrical Properties of Mesoporous Thin Films Made of Rare Earth Oxide Binaries. Chemistry of Materials, 2009, 21, 2184-2192.	6.7	39
36	Direct nano-in-micropatterning of TiO2 thin layers and TiO2/Pt nanoelectrode arrays by deep X-ray lithography. Journal of Materials Chemistry, 2011, 21, 3597.	6.7	36

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37	How Should Iron and Titanium be Combined in Oxides to Improve Photoelectrochemical Properties?. Journal of Physical Chemistry C, 2016, 120, 24521-24532.	3.1	35
38	Optimized Solâ€“Gel Routes to Synthesize Yttria-Stabilized Zirconia Thin Films as Solid Electrolytes for Solid Oxide Fuel Cells. Chemistry of Materials, 2012, 24, 4540-4548.	6.7	33
39	Dye-sensitized nanostructured crystalline mesoporous tin-doped indium oxide films with tunable thickness for photoelectrochemical applications. Journal of Materials Chemistry A, 2013, 1, 8217.	10.3	33
40	Nanoporous Piezo- and Ferroelectric Thin Films. Langmuir, 2012, 28, 2944-2949.	3.5	31
41	Solarâ€Waterâ€Splitting BiVO₄ Thinâ€Film Photoanodes Prepared By Using a Solâ€“Gel Dipâ€Coating Technique. ChemPhotoChem, 2017, 1, 273-280.	3.0	31
42	Determination of the Diffusion Coefficient of Protons in Nafion Thin Films by ac-Electrogravimetry. Langmuir, 2013, 29, 13655-13660.	3.5	30
43	Designing meso- and macropore architectures in hybrid organicâ€“inorganic membranes by combining surfactant and breath figure templating (BFT). Physical Chemistry Chemical Physics, 2009, 11, 3733.	2.8	29
44	Nanocrystalline mesoporous LiFePO4 thin-films as cathodes for Li-ion microbatteries. Journal of Materials Chemistry A, 2014, 2, 3038.	10.3	29
45	Synthesis of La2â^'xNiO4+Î´ oxides by polymeric route: non-stoichoimetry control. Ceramics International, 2004, 30, 2087-2098.	4.8	28
46	Fractal Inorganicâ^'Organic Interfaces in Hybrid Membranes for Efficient Proton Transport. Advanced Functional Materials, 2013, 23, 2872-2880.	14.9	28
47	Pechini synthesis and characterization of molybdenum carbide and nickel molybdenum carbide. Journal of Solid State Chemistry, 2008, 181, 2741-2747.	2.9	27
48	Sulfonic and Phosphonic Acid and Bifunctional Organicâ€“Inorganic Hybrid Membranes and Their Proton Conduction Properties. Chemistry - an Asian Journal, 2011, 6, 2992-3000.	3.3	27
49	Hybrid Li Ion Conducting Membrane as Protection for the Li Anode in an Aqueous Liâ€“Air Battery: Coupling Solâ€“Gel Chemistry and Electrospinning. Langmuir, 2017, 33, 9288-9297.	3.5	27
50	Silica immobilization of Geobacter sulfurreducens for constructing readyâ€toâ€use artificial bioelectrodes. Microbial Biotechnology, 2018, 11, 39-49.	4.2	27
51	CuO photoelectrodes synthesized by the solâ€“gel method for water splitting. Journal of Sol-Gel Science and Technology, 2019, 89, 255-263.	2.4	27
52	Structureâ€“Activity Relationship in Manganese Perovskite Oxide Nanocrystals from Molten Salts for Efficient Oxygen Reduction Reaction Electrocatalysis. Chemistry of Materials, 2020, 32, 4241-4247.	6.7	27
53	Elaboration and characterization of La2NiO4+Î´ powders and thin films via a modified solâ€“gel process. Journal of Solid State Chemistry, 2004, 177, 1471-1479.	2.9	25
54	Nanostructured ceria based thin films (â‰1 Î¼m) As cathode/electrolyte interfaces. Journal of Solid State Chemistry, 2013, 197, 113-119.	2.9	25

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55	Evaluation of a solâ€“gel process for the synthesis of La1â^'xSrxMnO3+Î´ cathodic multilayers for solid oxide fuel cells. Journal of Power Sources, 2004, 133, 214-222.	7.8	24
56	Synthesis of La2NiO4+Î´ oxides by solâ€“gel process: Structural and microstructural evolution from amorphous to nanocrystallized powders. Materials Research Bulletin, 2006, 41, 1747-1753.	5.2	24
57	Assessing the Oxidation Behavior of EC:DMC Based Electrolyte on Non-Catalytically Active Surface. Journal of the Electrochemical Society, 2020, 167, 080530.	2.9	24
58	Solâ€“gel route to advanced nanoelectrode arrays (NEA) based on titania gold nanocomposites. Journal of Materials Chemistry, 2008, 18, 1216.	6.7	23
59	Electrospinning a versatile tool for designing hybrid proton conductive membrane. Journal of Membrane Science, 2016, 513, 12-19.	8.2	22
60	Phase selective synthesis of nickel silicide nanocrystals in molten salts for electrocatalysis of the oxygen evolution reaction. Nanoscale, 2020, 12, 15209-15213.	5.6	22
61	Incorporation of vanadium into the framework of hydroxyapatites: importance of the vanadium content and pH conditions during the precipitation step. Physical Chemistry Chemical Physics, 2017, 19, 9630-9640.	2.8	21
62	Surfaceâ€Driven Magnetotransport in Perovskite Nanocrystals. Advanced Materials, 2017, 29, 1604745.	21.0	21
63	Native Collagen: Electrospinning of Pure, Cross-Linker-Free, Self-Supported Membrane. ACS Applied Bio Materials, 2020, 3, 2948-2957.	4.6	21
64	Lightâ€Induced Charge Separation in Mixed Electronic/Ionic Semiconductor Driving Lithiumâ€Ion Transfer for Photoâ€Rechargeable Electrode. Advanced Sustainable Systems, 2018, 2, 1700166.	5.3	20
65	Proton transport properties in hybrid membranes investigated by ac-electrogravimetry. Electrochemistry Communications, 2010, 12, 1136-1139.	4.7	19
66	Solâ€“Gel Route to Zirconiaâ€“Pt-Nanoelectrode Arrays 8 nm in Radius: Their Geometrical Impact in Mass Transport. Langmuir, 2012, 28, 3650-3657.	3.5	19
67	Thin Fiber-Based Separators for High-Rate Sodium Ion Batteries. ACS Applied Energy Materials, 2019, 2, 8369-8375.	5.1	18
68	The Role of Al³⁺â€Based Aqueous Electrolytes in the Charge Storage Mechanism of MnO_x Cathodes. Small, 2021, 17, e2101515.	10.0	18
69	Critical Current Density Limitation of LLZO Solid Electrolyte: Microstructure vs Interface. Journal of the Electrochemical Society, 2021, 168, 120550.	2.9	18
70	Gold Nanoelectrode Arrays and their Evaluation by Impedance Spectroscopy and Cyclic Voltammetry. ChemPhysChem, 2010, 11, 1971-1977.	2.1	17
71	Nickel-Doped Sodium Cobaltite 2D Nanomaterials: Synthesis and Electrocatalytic Properties. Chemistry of Materials, 2018, 30, 4986-4994.	6.7	17
72	Hydronium Ions Stabilized in a Titanate-Layered Structure with High Ionic Conductivity: Application to Aqueous Proton Batteries. Chemistry of Materials, 2020, 32, 9458-9469.	6.7	17

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73	Converting silicon nanoparticles into nickel iron silicide nanocrystals within molten salts for water oxidation electrocatalysis. Journal of Materials Chemistry A, 2022, 10, 1350-1358.	10.3	17
74	New chemical process for the preparation of fine powders and thin films of LSMx-YSZ composite oxides. Solid State Sciences, 2003, 5, 1377-1383.	3.2	16
75	Lanthanum ferromanganites thin films by solâ€“gel process. Influence of the organic/inorganic R ratio on the microstructural properties. Solid State Sciences, 2005, 7, 159-163.	3.2	16
76	Highly ordered metal oxide nanopatterns prepared by template-assisted chemical solution deposition. Journal of Sol-Gel Science and Technology, 2008, 48, 102-112.	2.4	16
77	Electrospun carbon fibers for microbial fuel cells: A novel bioanode design applied to wastewater treatment. Electrochimica Acta, 2021, 373, 137864.	5.2	16
78	Proton Transport in Electrospun Hybrid Organicâ€“Inorganic Membranes: An Illuminating Paradox. Advanced Functional Materials, 2016, 26, 594-604.	14.9	14
79	Activation of Câˆ’H Bond of Propane by Strong Basic Sites Generated by Bulk Proton Conduction on Vâ€Modified Hydroxyapatites for the Formation of Propene.. ChemCatChem, 2020, 12, 2506-2521.	3.7	14
80	Probing Properties, Stability, and Performances of Hierarchical Mesoporous Materials with Nanoscale Interfaces. Journal of Physical Chemistry C, 2012, 116, 7658-7663.	3.1	13
81	Silicaâ€“carbon hydrogels as cytocompatible bioelectrodes. Journal of Materials Chemistry B, 2013, 1, 606-609.	5.8	13
82	A one-pot route to prepare class II hybrid ionogel electrolytes. New Journal of Chemistry, 2014, 38, 2008-2015.	2.8	13
83	Understanding crystallization processes of NiO/Ce0.9Gd0.1O2âˆ’Î´ solâ€“gel processed thin films for the design of efficient electrodes: an in situ thermal ellipsometry analysis. Journal of Materials Chemistry, 2012, 22, 9368.	6.7	12
84	DWCNT-Doped Silica Gel Exhibiting Both Ionic and Electronic Conductivities. Journal of Physical Chemistry C, 2012, 116, 11306-11314.	3.1	12
85	Flexible Electroactive Nanomaterials Biotemplated with Versatile M13 Phage Platforms. Advanced Engineering Materials, 2013, 15, 954-961.	3.5	12
86	Characterization of LiCoO₂ nanoparticle suspensions by single collision events. Physical Chemistry Chemical Physics, 2019, 21, 5416-5423.	2.8	12
87	Towards a high MnO₂ loading and gravimetric capacity from proton-coupled Mn⁴⁺/Mn²⁺ reactions using a 3D free-standing conducting scaffold. Journal of Materials Chemistry A, 2021, 9, 1500-1506.	10.3	12
88	Proton Insertion Properties in a Hybrid Membrane/Conducting Polymer Bilayer Investigated by AC Electrogravimetry. Journal of the Electrochemical Society, 2010, 157, F69.	2.9	11
89	Nanocrystalline, mesoporous NiO/Ce0.9Gd0.1O2âˆ’Î´ thin films with tuned microstructures and electrical properties: in situ characterization of electrical responses during the reduction of NiO. Journal of Materials Chemistry A, 2013, 1, 10753.	10.3	11
90	Search for Li-electrochemical activity and Li-ion conductivity among lithium bismuth oxides. Solid State Ionics, 2015, 283, 68-74.	2.7	11

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91	Engineering nâ€“p junction for photo-electrochemical hydrogen production. Physical Chemistry Chemical Physics, 2017, 19, 30675-30682.	2.8	11
92	Mass Transport Properties of Silicified Graphite Felt Electrodes. Journal of Physical Chemistry C, 2013, 117, 15918-15923.	3.1	9
93	Experimental Descriptors for the Synthesis of Multicationic Nickel Perovskite Nanoparticles for Oxygen Reduction. ACS Applied Nano Materials, 2020, 3, 7482-7489.	5.0	9
94	A novel microbial fuel cell electrode design: prototyping a self-standing one-step bacteria-encapsulating bioanode with electrospinning. Journal of Materials Chemistry B, 2021, 9, 4309-4318.	5.8	9
95	Sulfonic Acid Functionalized Chitosan as a Sustainable Component for Proton Conductivity Management in PEMs. ChemistrySelect, 2017, 2, 2503-2511.	1.5	8
96	Versatile Molten Salt Synthesis of Manganite Perovskite Oxide Nanocrystals and Their Magnetic Properties. ChemNanoMat, 2019, 5, 358-363.	2.8	8
97	Synthesis of poly(phenylene oxide)-based fluoro-tin-oxide/ZrO2 nanoelectrode arrays by hybrid organic/inorganic approach. Electrochimica Acta, 2011, 56, 7155-7162.	5.2	7
98	Reduction of NiO to Ni in Nanocrystalline Composite NiO/Ce_{0.9}Gd_{0.1}O_{2-Î´} Porous Thin Films: Microstructure Evolution Through in Situ Impedance Spectroscopy. Journal of Physical Chemistry C, 2013, 117, 16297-16305.	3.1	7
99	Scrutiny of the LiCoO₂ Composite Electrode/Electrolyte Interface by Advanced Electrogravimetry and Implications for Aqueous Li-Ion Batteries. Journal of Physical Chemistry C, 2021, 125, 3859-3867.	3.1	7
100	Pt||ZrO2 nanoelectrode array synthesized through the solâ€“gel process: evaluation of their sensing capability. Journal of Solid State Electrochemistry, 2013, 17, 1099-1107.	2.5	6
101	Evaluation of Hydrophilized Graphite Felt for Electrochemical Heavy Metals Detection (Pb²⁺, Hg²⁺). International Journal of Electrochemistry, 2015, 2015, 1-7.	2.4	6
102	Red-Shifted Absorptions of Cation-Defective and Surface-Functionalized Anatase with Enhanced Photoelectrochemical Properties. ACS Omega, 2019, 4, 10929-10938.	3.5	6
103	Multicationic Sr4Mn3O10 mesostructures: molten salt synthesis, analytical electron microscopy study and reactivity. Materials Horizons, 2018, 5, 480-485.	12.2	5
104	Harvesting light with semiconductor: Role of interface in the processes of charge transfer. Materials Science in Semiconductor Processing, 2018, 73, 2-12.	4.0	5
105	Proton Diffusion Coefficient in Electrospun Hybrid Membranes by Electrochemical Impedance Spectroscopy. Langmuir, 2015, 31, 9737-9741.	3.5	4
106	Interplay between Electrical Relaxation and Structural Properties in Hybrid Membrane Based on PVDFâ€“HFP and Functionalized Silica Network. Journal of Physical Chemistry C, 2016, 120, 6963-6970.	3.1	4
107	Electron Transfer at the Metal Oxide/Electrolyte Interface: A Simple Methodology for Quantitative Kinetics Evaluation. Journal of Physical Chemistry C, 2018, 122, 12761-12770.	3.1	4
108	Synthesis, characterization and electrical properties of La0.7Sr0.3Co0.2Fe0.8O3/Gdâ€“CeO2 thin films (â‰¤500 nm). Journal of Materials Chemistry A, 2014, 2, 6448.	10.3	3

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109	Discussion on a Percolating Conducting Network of a Composite Thin-Film Electrode (â‰ˆ1 Î¼m) for Micro-Solid Oxide Fuel Cell Application. Langmuir, 2014, 30, 8889-8897.	3.5	3
110	Synergistic Effect Between Ca 4 V 4 O 14 and Vanadiumâ€Substituted Hydroxyapatite in the Oxidative Dehydrogenation of Propane. ChemCatChem, 2021, 13, 3995-4009.	3.7	3
111	Hydroxyapatites as Versatile Inorganic Hosts of Unusual Pentavalent Manganese Cations. Chemistry of Materials, 2020, 32, 10584-10593.	6.7	2
112	A first-principles computational comparison of defect-free and disordered, fluorinated anatase TiO2 (001) interfaces with water. RSC Advances, 2020, 10, 8982-8988.	3.6	2
113	Regeneration of Electrocatalyst through Li-Ion Insertion. Journal of the Electrochemical Society, 2022, 169, 030522.	2.9	2
114	Microstructural characterisation by X-ray scattering of perovskite-type La0.8Sr0.2MnO3Â±Î´ thin films prepared by a dip-coating process. Journal of Materials Science, 2007, 42, 4581-4590.	3.7	1
115	Sol-Gel Process to Prepare an Anode Supported YSZ Electrolyte. ECS Transactions, 2009, 25, 1651-1657.	0.5	1
116	Hybrid Electrolytes. ACS Symposium Series, 2015, , 73-97.	0.5	1
117	Investigating Charge Transfer in Functionalized Mesoporous EISAâ€“SnO₂ Films. Journal of Physical Chemistry C, 2017, 121, 23207-23217.	3.1	1
118	Interface evolution and performance degradation in LiCoO2 composite battery electrodes monitoredÂby advanced EQCM. Electrochimica Acta, 2022, 413, 140171.	5.2	1
119	Design and Development of High-Performance Hybrid Inorganic-Organic Fuel Cell Membranes. ECS Transactions, 2009, 25, 1091-1099.	0.5	0
120	Functionalized Hybrid Organic-Inorganic Membranes Investigated by ac-Electrogravimetry. ECS Transactions, 2009, 25, 1115-1123.	0.5	0
121	Electropolymerization of Phenol on FTO Modified ZrO2 Nanoelectrode Arrays: Morphology and Electrochemical Properties. ECS Meeting Abstracts, 2010, , .	0.0	0