Francesca Soavi

List of Publications by Year
in descending order

128 papers	6,073 citations	76196 40 h-index	74018 75 g-index
134 all docs	134 docs citations	134 times ranked	6437 citing authors

#	Article	IF	Citations
1	Electrochemical stability of steel, Ti, and Cu current collectors in water-in-salt electrolyte for green batteries and supercapacitors. Journal of Solid State Electrochemistry, 2022, 26, 85-95.	1.2	17
2	Performance Comparison of LMNO Cathodes Produced with Pullulan or PEDOT:PSS Water-Processable Binders. Energies, 2022, 15, 2608.	1.6	6
3	Easy recovery of Li-ion cathode powders by the use of water-processable binders. Electrochimica Acta, 2022, 418, 140376.	2.6	11
4	Semi-solid lithium/oxygen flow battery: an emerging, high-energy technology. Current Opinion in Chemical Engineering, 2022, 37, 100835.	3.8	6
5	Redox flow batteries: Status and perspective towards sustainable stationary energy storage. Journal of Power Sources, 2021, 481, 228804.	4.0	336
6	Increasing bioelectricity generation in microbial fuel cells by a high-performance cellulose-based membrane electrode assembly. Applied Energy, 2021, 282, 116150.	5.1	31
7	Improving the Electrical Percolating Network of Carbonaceous Slurries by Superconcentrated Electrolytes: An Electrochemical Impedance Spectroscopy Study. ACS Applied Materials & Interfaces, 2021, 13, 13872-13882.	4.0	11
8	Pseudocapacitive and Ionâ€Insertion Materials: A Bridge between Energy Storage, Electronics and Neuromorphic Computing. ChemElectroChem, 2021, 8, 2630-2633.	1.7	4
9	3D Network of Sepia Melanin and Nâ€•and, Sâ€Doped Graphitic Carbon Quantum Dots for Sustainable Electrochemical Capacitors. Advanced Sustainable Systems, 2021, 5, 2100152.	2.7	2
10	Circumneutral concentrated ammonium acetate solution as water-in-salt electrolyte. Electrochimica Acta, 2021, 389, 138653.	2.6	14
11	Valorization of biodigestor plant waste in electrodes for supercapacitors and microbial fuel cells. Electrochimica Acta, 2021, 391, 138960.	2.6	22
12	Characterization and Model Parameters of Large Commercial Supercapacitor Cells. IEEE Access, 2021, 9, 20376-20390.	2.6	10
13	Combination of bioelectrochemical systems and electrochemical capacitors: Principles, analysis and opportunities. Biotechnology Advances, 2020, 39, 107456.	6.0	55
14	Light-enhanced Electrochemical Energy Storage of Synthetic Melanin on Conductive Glass Substrates. MRS Advances, 2020, 5, 1441-1448.	0.5	1
15	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 893-903.	1.7	16
16	Electro-polymerized polyaniline modified conductive bacterial cellulose anode for supercapacitive microbial fuel cells and studying the role of anodic biofilm in the capacitive behavior. Journal of Power Sources, 2020, 478, 228822.	4.0	41
17	Fabrication of a 2.8 V high-performance aqueous flexible fiber-shaped asymmetric micro-supercapacitor based on MnO₂/PEDOT:PSS-reduced graphene oxide nanocomposite grown on carbon fiber electrode. Journal of Materials Chemistry A, 2020, 8, 19588-19602.	5.2	59
18	Air-breathing cathode self-powered supercapacitive microbial fuel cell with human urine as electrolyte. Electrochimica Acta, 2020, 353, 136530.	2.6	10

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19	Enhanced electrodialytic bioleaching of fly ashes of municipal solid waste incineration for metal recovery. Electrochimica Acta, 2020, 345, 136188.	2.6	14
20	Ion-gated transistors based on porous and compact TiO2 films: Effect of Li ions in the gating medium. AIP Advances, 2020, 10, .	0.6	10
21	Nitrogenâ€Doped Mesoporous Carbon Electrodes Prepared from Templating Propylamineâ€Functionalized Silica. ChemElectroChem, 2020, 7, 1914-1921.	1.7	8
22	Natural Polymers for Green Supercapacitors. Energies, 2020, 13, 3115.	1.6	10
23	Electronic Transport in the Biopigment Sepia Melanin. ACS Applied Bio Materials, 2020, 3, 5244-5252.	2.3	36
24	Boosting Microbial Fuel Cell Performance by Combining with an External Supercapacitor: An Electrochemical Study. ChemElectroChem, 2020, 7, 877-877.	1.7	3
25	Pullulan-ionic liquid-based supercapacitor: A novel, smart combination of components for an easy-to-dispose device. Electrochimica Acta, 2020, 338, 135872.	2.6	24
26	Eumelanin electrodes in buffered aqueous media at different pH values. Electrochimica Acta, 2020, 347, 136250.	2.6	10
27	Supercapacitive operational mode in microbial fuel cell. Current Opinion in Electrochemistry, 2020, 22, 1-8.	2.5	32
28	Transbattery, a Novel Class of Device to Study Electronic Properties of Nanostructured Materials for Energetics.. ECS Meeting Abstracts, 2020, MA2020-01, 325-325.	0.0	0
29	Correlating Structure and Properties of Superâ€Concentrated Electrolyte Solutions: ¹⁷O NMR and Electrochemical Characterization. ChemElectroChem, 2019, 6, 4002-4009.	1.7	7
30	Melanin: A Greener Route To Enhance Energy Storage under Solar Light. ACS Omega, 2019, 4, 12244-12251.	1.6	40
31	Ambient-stable, ion-gated poly[N-9â€²-heptadecanyl-2,7-carbazole-alt-5,5-(4â€²,7â€²-di-2-thienyl-2â€²,1â€²,3â€²-benzothiadiazole)] (PCDTBT) transistors and phototransistors. Organic Electronics, 2019, 74, 265-268.	1.4	6
32	Poly(3,4-ethylenedioxythiophene) (PEDOT) Coatings for High-Quality Electromyography Recording. ACS Applied Bio Materials, 2019, 2, 5154-5163.	2.3	28
33	Oxygen Redox Reaction in Ionic Liquid and Ionic Liquid-like Based Electrolytes: A Scanning Electrochemical Microscopy Study. Journal of Physical Chemistry Letters, 2019, 10, 3333-3338.	2.1	4
34	Tungsten oxide ion-gated phototransistors using ionic liquid and aqueous gating media. Journal Physics D: Applied Physics, 2019, 52, 305102.	1.3	13
35	Semi-empirical modeling of the power balance of flow lithium/oxygen batteries. Applied Energy, 2019, 248, 383-389.	5.1	8
36	Electropolymerized Poly(3,4-ethylenedioxythiophene) (PEDOT) Coatings for Implantable Deep-Brain-Stimulating Microelectrodes. ACS Applied Materials & Interfaces, 2019, 11, 17226-17233.	4.0	68

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37	Self-stratified and self-powered micro-supercapacitor integrated into a microbial fuel cell operating in human urine. Electrochimica Acta, 2019, 307, 241-252.	2.6	38
38	Toward Low-Cost and Sustainable Supercapacitor Electrode Processing: Simultaneous Carbon Grafting and Coating of Mixed-Valence Metal Oxides by Fast Annealing. Frontiers in Chemistry, 2019, 7, 25.	1.8	10
39	An Electrochemical Study on the Effect of Metal Chelation and Reactive Oxygen Species on a Synthetic Neuromelanin Model. Frontiers in Bioengineering and Biotechnology, 2019, 7, 227.	2.0	4
40	10. Supercapacitors in bioelectrochemical systems. , 2019, , 189-212.		0
41	Increased power generation in supercapacitive microbial fuel cell stack using Fe N C cathode catalyst. Journal of Power Sources, 2019, 412, 416-424.	4.0	42
42	Flowable Semi-Solid Electrodes with Superconcentrated Electrolytes: An Electrochemical Impedance Study. ECS Meeting Abstracts, 2019, , .	0.0	1
43	Strategies to Boost MFC Power By Supercapacitive Materials and Components. ECS Meeting Abstracts, 2019, , .	0.0	0
44	(Invited) Green Materials for Sustainable Supercapacitors. ECS Meeting Abstracts, 2019, , .	0.0	0
45	Ceramic Microbial Fuel Cells Stack: power generation in standard and supercapacitive mode. Scientific Reports, 2018, 8, 3281.	1.6	55
46	Carbonaceous catholyte for high energy density semi-solid Li/O2 flow battery. Carbon, 2018, 130, 749-757.	5.4	19
47	1,3â€Dioxolane: A Strategy to Improve Electrode Interfaces in Lithium Ion and Lithiumâ€Sulfur Batteries. ChemElectroChem, 2018, 5, 1272-1278.	1.7	20
48	Tungsten oxide ion gel-gated transistors: how structural and electrochemical properties affect the doping mechanism. Journal of Materials Chemistry C, 2018, 6, 1980-1987.	2.7	16
49	Electrolyte-gated transistors based on phenyl-C₆₁-butyric acid methyl ester (PCBM) films: bridging redox properties, charge carrier transport and device performance. Chemical Communications, 2018, 54, 5490-5493.	2.2	11
50	Simple preparation of carbonâ€“bimetal oxide nanospinels for high-performance bifunctional oxygen electrocatalysts. New Journal of Chemistry, 2018, 42, 20156-20162.	1.4	8
51	Three-dimensional graphene nanosheets as cathode catalysts in standard and supercapacitive microbial fuel cell. Journal of Power Sources, 2017, 356, 371-380.	4.0	108
52	Sodium Alginate: A Water-Processable Binder in High-Voltage Cathode Formulations. Journal of the Electrochemical Society, 2017, 164, A6171-A6177.	1.3	60
53	Oxygen Redox Reaction in Lithium-based Electrolytes: from Salt-in-Solvent to Solvent-in-Salt. Electrochimica Acta, 2017, 245, 296-302.	2.6	19
54	Supercapacitive microbial desalination cells: New class of power generating devices for reduction of salinity content. Applied Energy, 2017, 208, 25-36.	5.1	43

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55	Tin Dioxide Electrolyte-Gated Transistors Working in Depletion and Enhancement Modes. ACS Applied Materials & Interfaces, 2017, 9, 37013-37021.	4.0	17
56	Perovskite solar cell â€“ electrochemical double layer capacitor interplay. Electrochimica Acta, 2017, 258, 825-833.	2.6	18
57	Flexible conducting polymer transistors with supercapacitor function. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 96-103.	2.4	26
58	An electrochemical study of natural and chemically controlled eumelanin. APL Materials, 2017, 5, 126108.	2.2	31
59	Supercapacitive microbial fuel cell: Characterization and analysis for improved charge storage/delivery performance. Bioresource Technology, 2016, 218, 552-560.	4.8	67
60	Self-feeding paper based biofuel cell/self-powered hybrid Î¼-supercapacitor integrated system. Biosensors and Bioelectronics, 2016, 86, 459-465.	5.3	59
61	Photolithographically Patterned TiO₂ Films for Electrolyte-Gated Transistors. ACS Applied Materials & Interfaces, 2016, 8, 14855-14862.	4.0	15
62	A novel concept of Semi-solid, Li Redox Flow Air (O2) Battery: a breakthrough towards high energy and power batteries. Electrochimica Acta, 2016, 206, 291-300.	2.6	26
63	Miniaturized supercapacitors: key materials and structures towards autonomous and sustainable devices and systems. Journal of Power Sources, 2016, 326, 717-725.	4.0	82
64	Design Study of a Novel, Semi-Solid Li/O₂ Redox Flow Battery. ECS Transactions, 2016, 72, 1-9.	0.3	10
65	Melanin-based flexible supercapacitors. Journal of Materials Chemistry C, 2016, 4, 9516-9525.	2.7	125
66	New Formulations of High-Voltage Cathodes for Li-Ion Batteries with Water-Processable Binders. ECS Transactions, 2016, 73, 249-257.	0.3	5
67	Co-generation of hydrogen and power/current pulses from supercapacitive MFCs using novel HER iron-based catalysts. Electrochimica Acta, 2016, 220, 672-682.	2.6	31
68	Self-powered supercapacitive microbial fuel cell: The ultimate way of boosting and harvesting power. Biosensors and Bioelectronics, 2016, 78, 229-235.	5.3	112
69	An Innovative Semi-Solid Lithium Redox Flow Air (O2) Battery Concept. ECS Meeting Abstracts, 2016, , .	0.0	0
70	(Science for Solving Societyâ€™s Problems Challenge Grant Winner) Self-Powered Supercapacitive Microbial Fuel Cell. ECS Meeting Abstracts, 2016, , .	0.0	0
71	New Formulations of High-Voltage Cathodes for Li-Ion Batteries with Water-Processable Binders. ECS Meeting Abstracts, 2016, , .	0.0	0
72	A Novel, Semi-Solid Li/O2 Redox Flow Battery. ECS Meeting Abstracts, 2016, , .	0.0	1

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73	Effect of channel thickness, electrolyte ions, and dissolved oxygen on the performance of organic electrochemical transistors. Applied Physics Letters, 2015, 107, .	1.5	40
74	Ionic liquidâ€“water mixtures and ion gels as electrolytes for organic electrochemical transistors. Journal of Materials Chemistry C, 2015, 3, 6549-6553.	2.7	29
75	Conducting Polymer Transistors Making Use of Activated Carbon Gate Electrodes. ACS Applied Materials & Interfaces, 2015, 7, 969-973.	4.0	39
76	Protonic and Electronic Transport in Hydrated Thin Films of the Pigment Eumelanin. Chemistry of Materials, 2015, 27, 436-442.	3.2	158
77	Flexible, ionic liquid-based micro-supercapacitor produced by supersonic cluster beam deposition. Electrochimica Acta, 2015, 170, 57-62.	2.6	30
78	Reduced Graphene Oxide in Cathode Formulations Based on LiNi_{0.5}Mn_{1.5}O₄. Journal of the Electrochemical Society, 2015, 162, A2174-A2179.	1.3	8
79	Electrolyte-gated polymer thin film transistors making use of ionic liquids and ionic liquid-solvent mixtures. Journal of Applied Physics, 2015, 117, 112809.	1.1	14
80	The Role of Modified Graphene in Cathode Formulations for Lithium-Ion Batteries. ECS Transactions, 2015, 66, 139-147.	0.3	2
81	Electrolyte-Gated WO₃ Transistors: Electrochemistry, Structure, and Device Performance. Journal of Physical Chemistry C, 2015, 119, 21732-21738.	1.5	42
82	Leakage currents and self-discharge of ionic liquid-based supercapacitors. Journal of Applied Electrochemistry, 2014, 44, 491-496.	1.5	38
83	TransCap: a monolithically integrated supercapacitor and electrolyte-gated transistor. Journal of Materials Chemistry C, 2014, 2, 10273-10276.	2.7	12
84	Low voltage electrolyte-gated organic transistors making use of high surface area activated carbon gate electrodes. Journal of Materials Chemistry C, 2014, 2, 5690-5694.	2.7	50
85	Surface features and thermal stability of mesoporous Fe doped geoinspired synthetic chrysotile nanotubes. Microporous and Mesoporous Materials, 2014, 197, 8-16.	2.2	10
86	Role of Oxygen Mass Transport in Rechargeable Li/O₂ Batteries Operating with Ionic Liquids. Journal of Physical Chemistry Letters, 2013, 4, 1379-1382.	2.1	70
87	Catalyst-free porous carbon cathode and ionic liquid for high efficiency, rechargeable Li/O2 battery. Journal of Power Sources, 2013, 224, 115-119.	4.0	70
88	An electrochemical study of oxygen reduction in pyrrolidinium-based ionic liquids for lithium/oxygen batteries. Electrochimica Acta, 2012, 83, 94-104.	2.6	93
89	Role of Carbon Porosity and Ion Size in the Development of Ionic Liquid Based Supercapacitors. Journal of the Electrochemical Society, 2011, 158, A22.	1.3	75
90	Effect of lithium ions on oxygen reduction in ionic liquid-based electrolytes. Electrochemistry Communications, 2011, 13, 1090-1093.	2.3	83

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91	Graphene and carbon nanotube structures supported on mesoporous xerogel carbon as catalysts for oxygen reduction reaction in proton-exchange-membrane fuel cells. International Journal of Hydrogen Energy, 2011, 36, 5038-5046.	3.8	47
92	Mesoporous Carbon Design for Ionic Liquidâ€Based, Doubleâ€Layer Supercapacitors. Fuel Cells, 2010, 10, 840-847.	1.5	65
93	ILHYPOS Ionic Liquid-Based Supercapacitors. ECS Transactions, 2009, 25, 25-30.	0.3	6
94	Dynamic Pulse Power and Energy of Ionic-Liquid-Based Supercapacitor for HEV Application. Journal of the Electrochemical Society, 2009, 156, A661.	1.3	34
95	CAPACITORS | Electrochemical Capacitors: Ionic Liquid Electrolytes. , 2009, , 649-657.		10
96	High voltage, asymmetric EDLCs based on xerogel carbon and hydrophobic IL electrolytes. Journal of Power Sources, 2008, 178, 490-496.	4.0	106
97	Safe, high-energy supercapacitors based on solvent-free ionic liquid electrolytes. Journal of Power Sources, 2008, 185, 1575-1579.	4.0	237
98	Supported PtRu on mesoporous carbons for direct methanol fuel cells. Journal of Power Sources, 2008, 185, 615-620.	4.0	34
99	Electropolymerization of poly(3-methylthiophene) in pyrrolidinium-based ionic liquids for hybrid supercapacitors. Electrochimica Acta, 2008, 53, 7967-7971.	2.6	49
100	Capacitance response of carbons in solvent-free ionic liquid electrolytes. Electrochemistry Communications, 2007, 9, 1567-1572.	2.3	121
101	Strategies for high-performance supercapacitors for HEV. Journal of Power Sources, 2007, 174, 89-93.	4.0	107
102	Electrode materials for ionic liquid-based supercapacitors. Journal of Power Sources, 2007, 174, 648-652.	4.0	69
103	Cryo- and xerogel carbon supported PtRu for DMFC anodes. Journal of Power Sources, 2007, 172, 578-586.	4.0	43
104	MW-assisted synthesis of SVO for ICD primary batteries. Journal of Power Sources, 2006, 157, 483-487.	4.0	16
105	The use of ionic liquids as solvent-free green electrolytes for hybrid supercapacitors. Applied Physics A: Materials Science and Processing, 2006, 82, 627-632.	1.1	85
106	Electrodeposited PtRu on cryogel carbonâ€"Nafion supports for DMFC anodes. Journal of Power Sources, 2006, 161, 826-830.	4.0	28
107	A novel galvanostatic polymerization for high specific capacitance poly(3-methylthiophene) in ionic liquid. Journal of Power Sources, 2006, 162, 735-737.	4.0	23
108	Hybrid Supercapacitors with Ionic Liquid Electrolytes. ECS Transactions, 2006, 1, 55-59.	0.3	5

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109	Cycling stability of a hybrid activated carbon//poly(3-methylthiophene) supercapacitor with N-butyl-N-methylpyrrolidinium bis(trifluoromethanesulfonyl)imide ionic liquid as electrolyte. Electrochimica Acta, 2005, 50, 2233-2237.	2.6	186
110	Increased Performance of Electrodeposited PtRu/C-Nafion Catalysts for DMFC. Electrochemical and Solid-State Letters, 2005, 8, A110.	2.2	14
111	Increased Performance of Electrodeposited PtRu/C-Nafion Catalysts for DMFC [Electrochem. Solid-State Lett., 8, A110 (2005)]. Electrochemical and Solid-State Letters, 2005, 8, L1.	2.2	2
112	Carbon Supports for Electrodeposited Pt-Ru Catalysts for DMFCs. Journal of the Electrochemical Society, 2004, 151, A1919.	1.3	52
113	Ionic liquids for hybrid supercapacitors. Electrochemistry Communications, 2004, 6, 566-570.	2.3	277
114	Characterization and electrochemical performance of Li-rich manganese oxide spinel/poly(3,4-ethylenedioxythiophene) as the positive electrode for lithium-ion batteries. Journal of Electroanalytical Chemistry, 2003, 553, 125-133.	1.9	18
115	Li1.01Mn1.97O4 surface modification by poly(3,4-ethylenedioxythiophene). Journal of Power Sources, 2003, 119-121, 695-700.	4.0	35
116	Activated Carbon/Conducting Polymer Hybrid Supercapacitors. Journal of the Electrochemical Society, 2003, 150, A645.	1.3	177
117	Conducting polymers as electrode materials in supercapacitors. Solid State Ionics, 2002, 148, 493-498.	1.3	342
118	Carbon-Poly(3-methylthiophene) Hybrid Supercapacitors. Journal of the Electrochemical Society, 2001, 148, A845.	1.3	215
119	Polymer-based supercapacitors. Journal of Power Sources, 2001, 97-98, 812-815.	4.0	254
120	New trends in electrochemical supercapacitors. Journal of Power Sources, 2001, 100, 164-170.	4.0	267
121	Capacitance and cycling stability of poly(alkoxythiophene) derivative electrodes. Electrochemistry Communications, 2001, 3, 16-19.	2.3	37
122	Polythiophene S,S dioxides: an investigation on electrochemical doping. Electrochimica Acta, 2000, 45, 2273-2278.	2.6	17
123	Quartz crystal impedance and EQCM measurements applied to dithienothiophene-based polymers. Physical Chemistry Chemical Physics, 2000, 2, 2993-2998.	1.3	5
124	New n-dopable thiophene based polymers. Synthetic Metals, 1999, 101, 13-14.	2.1	11
125	EQCM and Quartz Crystal Impedance Measurements for the Characterization of Thiophene-Based Conducting Polymers. Materials Research Society Symposia Proceedings, 1999, 600, 197.	0.1	1
126	Composite Polymer Electrolytes with Improved Lithium Metal Electrode Interfacial Properties: I. Elechtrochemical Properties of Dry PEOâ€LiX Systems. Journal of the Electrochemical Society, 1998, 145, 4126-4132.	1.3	151

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127	An Improved Composite Polymer Electrolyte for Lithium Metal Batteries. Materials Research Society Symposia Proceedings, 1998, 548, 359.	0.1	0
128	Electrodeposition of Cobaltâ€Copper Oxides decorated with conductive polymer for supercapacitor electrodes with high stability. ChemElectroChem, 0, , .	1.7	2