Csaba Janaky

List of Publications by Year
in descending order

115 papers	4,612 citations	109137 35 h-index	110170 64 g-index
118 all docs	118 docs citations	118 times ranked	6114 citing authors

#	Article	IF	Citations
1	Continuous-flow electroreduction of carbon dioxide. Progress in Energy and Combustion Science, 2017, 62, 133-154.	15.8	279
2	Efficient solar photoelectrosynthesis of methanol from carbon dioxide using hybrid CuOâ€“Cu2O semiconductor nanorod arrays. Chemical Communications, 2013, 49, 1297.	2.2	230
3	Multilayer Electrolyzer Stack Converts Carbon Dioxide to Gas Products at High Pressure with High Efficiency. ACS Energy Letters, 2019, 4, 1770-1777.	8.8	207
4	Operando cathode activation with alkali metal cations for high current density operation of water-fed zero-gap carbon dioxide electrolysers. Nature Energy, 2021, 6, 439-448.	19.8	175
5	Recent Advances in Solar-Driven Carbon Dioxide Conversion: Expectations versus Reality. ACS Energy Letters, 2020, 5, 1996-2014.	8.8	173
6	High carbonate ion conductance of a robust PiperION membrane allows industrial current density and conversion in a zero-gap carbon dioxide electrolyzer cell. Energy and Environmental Science, 2020, 13, 4098-4105.	15.6	147
7	A Victim of Halide Ion Segregation. How Light Soaking Affects Solar Cell Performance of Mixed Halide Lead Perovskites. ACS Energy Letters, 2017, 2, 1860-1861.	8.8	142
8	Morphological Attributes Govern Carbon Dioxide Reduction on N-Doped Carbon Electrodes. Joule, 2019, 3, 1719-1733.	11.7	132
9	Tungsten-based oxide semiconductors for solar hydrogen generation. Catalysis Today, 2013, 199, 53-64.	2.2	123
10	Enhanced Photoelectrochemical Performance of Cuprous Oxide/Graphene Nanohybrids. Journal of the American Chemical Society, 2017, 139, 6682-6692.	6.6	120
11	Tailoring Copper Oxide Semiconductor Nanorod Arrays for Photoelectrochemical Reduction of Carbon Dioxide to Methanol. ChemPhysChem, 2013, 14, 2251-2259.	1.0	119
12	Electrochemistry and Spectroelectrochemistry of Lead Halide Perovskite Films: Materials Science Aspects and Boundary Conditions. Chemistry of Materials, 2018, 30, 561-569.	3.2	110
13	Electrochemical Hole Injection Selectively Expels Iodide from Mixed Halide Perovskite Films. Journal of the American Chemical Society, 2019, 141, 10812-10820.	6.6	104
14	The role of (photo)electrochemistry in the rational design of hybrid conducting polymer/semiconductor assemblies: From fundamental concepts to practical applications. Progress in Polymer Science, 2015, 43, 96-135.	11.8	102
15	Photocatalytic Activity of Inorganic Semiconductor Surfaces: Myths, Hype, and Reality. Journal of Physical Chemistry Letters, 2015, 6, 139-147.	2.1	97
16	Bringing Conjugated Polymers and Oxide Nanoarchitectures into Intimate Contact: Light-Induced Electrodeposition of Polypyrrole and Polyaniline on Nanoporous WO₃ or TiO₂ Nanotube Array. Journal of Physical Chemistry C, 2012, 116, 19145-19155.	1.5	92
17	Conducting polymer-based hybrid assemblies for electrochemical sensing: a materials science perspective. Analytical and Bioanalytical Chemistry, 2013, 405, 3489-3511.	1.9	88
18	Electro- and Photoreduction of Carbon Dioxide: The Twain Shall Meet at Copper Oxide/Copper Interfaces. ACS Energy Letters, 2016, 1, 332-338.	8.8	79

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19	Reviewâ€"Copper Oxide-Based Ternary and Quaternary Oxides: Where Solid-State Chemistry Meets Photoelectrochemistry. Journal of the Electrochemical Society, 2018, 165, H3192-H3206.	1.3	70
20	Electrodeposited Polyaniline in a Nanoporous WO₃ Matrix: An Organic/Inorganic Hybrid Exhibiting Both p- and n-Type Photoelectrochemical Activity. Journal of Physical Chemistry C, 2012, 116, 4234-4242.	1.5	68
21	Decoration of ultra-long carbon nanotubes with Cu₂O nanocrystals: a hybrid platform for enhanced photoelectrochemical CO₂reduction. Journal of Materials Chemistry A, 2016, 4, 3139-3147.	5.2	67
22	Composition-Dependent Electrocatalytic Behavior of Auâ€"Sn Bimetallic Nanoparticles in Carbon Dioxide Reduction. ACS Energy Letters, 2019, 4, 48-53.	8.8	65
23	Anode Catalysts in CO₂ Electrolysis: Challenges and Untapped Opportunities. ACS Catalysis, 2022, 12, 1037-1051.	5.5	64
24	Solution Combustion Synthesis, Characterization, and Photoelectrochemistry of CuNb₂O₆ and ZnNb₂O₆ Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 16024-16034.	1.5	56
25	Electrochemical Reduction of Carbon Dioxide on Nitrogen-Doped Carbons: Insights from Isotopic Labeling Studies. ACS Energy Letters, 2018, 3, 722-723.	8.8	56
26	Solution Combustion Synthesis, Characterization, and Photocatalytic Activity of CuBi₂O₄ and Its Nanocomposites with CuO and Î±-Bi₂O₃. Journal of Physical Chemistry C, 2017, 121, 8252-8261.	1.5	55
27	Iodine (I) Expulsion at Photoirradiated Mixed Halide Perovskite Interface. Should I Stay or Should I Go?. ACS Energy Letters, 2020, 5, 1872-1880.	8.8	55
28	Polyaniline films photoelectrochemically reduce CO₂ to alcohols. Chemical Communications, 2016, 52, 8858-8861.	2.2	53
29	Nanostructured metal-N-C electrocatalysts for CO2 reduction and hydrogen evolution reactions. Applied Catalysis B: Environmental, 2018, 232, 512-520.	10.8	48
30	Timeâ€•and Energyâ€Efficient Solution Combustion Synthesis of Binary Metal Tungstate Nanoparticles with Enhanced Photocatalytic Activity. ChemSusChem, 2015, 8, 1652-1663.	3.6	44
31	On the measured optical bandgap values of inorganic oxide semiconductors for solar fuels generation. Catalysis Today, 2018, 300, 136-144.	2.2	43
32	Conducting Polymer-Based Electrode with Magnetic Behavior: Electrochemical Synthesis of Poly(3-thiophene-acetic-acid)/Magnetite Nanocomposite Thin Layers. Journal of Physical Chemistry C, 2009, 113, 1352-1358.	1.5	41
33	Modulation of Charge Recombination in CsPbBr₃ Perovskite Films with Electrochemical Bias. Journal of the American Chemical Society, 2018, 140, 86-89.	6.6	41
34	Hybrid FeNiOOH/Î±â€Fe₂O₃/Graphene Photoelectrodes with Advanced Water Oxidation Performance. Advanced Functional Materials, 2020, 30, 2002124.	7.8	41
35	Molecular and Supramolecular Parameters Dictating the Thermoelectric Performance of Conducting Polymers: A Case Study Using Poly(3-alkylthiophene)s. Journal of Physical Chemistry C, 2015, 119, 8472-8479.	1.5	40
36	Local Chemical Environment Governs Anode Processes in CO₂ Electrolyzers. ACS Energy Letters, 2021, 6, 3801-3808.	8.8	40

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37	Au/Pb Interface Allows the Methane Formation Pathway in Carbon Dioxide Electroreduction. ACS Catalysis, 2020, 10, 5681-5690.	5.5	37
38	Bandgap-engineered quaternary M x Bi 2â‾'x Ti 2 O 7 (M: Fe, Mn) semiconductor nanoparticles: Solution combustion synthesis, characterization, and photocatalysis. Applied Catalysis B: Environmental, 2017, 208, 148-160.	10.8	34
39	Rapid One-Pot Synthesis and Photoelectrochemical Properties of Copper Vanadates. ACS Applied Energy Materials, 2019, 2, 2837-2847.	2.5	34
40	Coupling electrochemical carbon dioxide conversion with value-added anode processes: An emerging paradigm. Current Opinion in Electrochemistry, 2021, 25, 100621.	2.5	34
41	One-Step Electrodeposition of Nanocrystalline TiO₂ Films with Enhanced Photoelectrochemical Performance and Charge Storage. ACS Applied Energy Materials, 2018, 1, 851-858.	2.5	32
42	Photocorrosion at Irradiated Perovskite/Electrolyte Interfaces. Journal of the American Chemical Society, 2020, 142, 21595-21614.	6.6	32
43	Electrochemical Grafting of Poly(3,4-ethylenedioxythiophene) into a Titanium Dioxide Nanotube Host Network. Langmuir, 2010, 26, 13697-13702.	1.6	31
44	Synthesis and characterization of poly(3-octylthiophene)/Î³-Fe2O3 nanocompositeâ€"A promising combination of superparamagneticâ€"thermoelectricâ€"conducting properties. Synthetic Metals, 2008, 158, 1009-1014.	2.1	30
45	Photocatalytic Generation of Syngas Using Combustionâ€Synthesized Silver Bismuth Tungstate. ChemPhysChem, 2012, 13, 2945-2955.	1.0	30
46	Reasons behind the improved thermoelectric properties of poly(3-hexylthiophene) nanofiber networks. RSC Advances, 2014, 4, 55328-55333.	1.7	28
47	On the electrochemical synthesis and charge storage properties of WO3/polyaniline hybrid nanostructures. Journal of Solid State Electrochemistry, 2015, 19, 2741-2751.	1.2	28
48	Correlation between the work function of Auâ€"Ag nanoalloys and their electrocatalytic activity in carbon dioxide reduction. Electrochimica Acta, 2019, 313, 171-178.	2.6	27
49	On the Unexpected Cation Exchange Behavior, Caused by Covalent Bond Formation between PEDOT and Cl^{â€"} Ions: Extending the Conception for the Polymerâ€"Dopant Interactions. Journal of Physical Chemistry B, 2012, 116, 5491-5500.	1.2	26
50	Intermittent Operation of CO₂ Electrolyzers at Industrially Relevant Current Densities. ACS Energy Letters, 2022, 7, 1859-1861.	8.8	26
51	Photocatalytic, photoelectrochemical, and antibacterial activity of benign-by-design mechanochemically synthesized metal oxide nanomaterials. Catalysis Today, 2017, 284, 3-10.	2.2	23
52	Mechanistic Aspects of Photoelectrochemical Polymerization of Polypyrrole on a TiO2 Nanotube Array. Electrochimica Acta, 2014, 122, 303-309.	2.6	22
53	On the Substantially Improved Photoelectrochemical Properties of Nanoporous WO3 Through Surface Decoration with RuO2. Electrocatalysis, 2013, 4, 382-389.	1.5	21
54	Electrodeposition of Inorganic Oxide/Nanocarbon Composites: Opportunities and Challenges. ChemElectroChem, 2016, 3, 181-192.	1.7	21

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55	Rapid synthesis of interconnected CuCrO 2 nanostructures: A promising electrode material for photoelectrochemical fuel generation. Electrochimica Acta, 2018, 272, 22-32.	2.6	21
56	Challenges and rewards of the electrosynthesis of macroscopic aligned carbon nanotube array/conducting polymer hybrid assemblies. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 1507-1518.	2.4	20
57	Photoelectrochemical Infiltration of a Conducting Polymer (PEDOT) into Metal-Chalcogenide Decorated TiO2 Nanotube Arrays. Electrochimica Acta, 2015, 151, 467-476.	2.6	20
58	Photoelectrochemistry by Design: Tailoring the Nanoscale Structure of Pt/NiO Composites Leads to Enhanced Photoelectrochemical Hydrogen Evolution Performance. Journal of Physical Chemistry C, 2017, 121, 12148-12158.	1.5	20
59	Optoelectronic Properties of CuI Photoelectrodes. Journal of Physical Chemistry Letters, 2019, 10, 259-264.	2.1	20
60	Chemical synthesis of poly(3-thiophene-acetic-acid)/magnetite nanocomposites with tunable magnetic behaviour. Synthetic Metals, 2010, 160, 65-71.	2.1	19
61	Structureâ€“Property Relationships in Unsymmetric Bis(antiaromatics): Who Wins the Battle between Pentalene and Benzocyclobutadiene?. Journal of Organic Chemistry, 2020, 85, 5158-5172.	1.7	19
62	Visible-Light-Enhanced Electrocatalytic Activity of a Polypyrrole/Magnetite Hybrid Electrode toward the Reduction of Dissolved Dioxygen. Journal of Physical Chemistry C, 2010, 114, 19338-19344.	1.5	18
63	Photocatalytically Prepared Metal Nanoclusterâ€“Oxide Semiconductorâ€“Carbon Nanocomposite Electrodes for Driving Multielectron Transfer. Journal of Physical Chemistry Letters, 2013, 4, 3468-3478.	2.1	18
64	New insights into the relationship between structure and photocatalytic properties of TiO₂ catalysts. RSC Advances, 2015, 5, 2421-2428.	1.7	18
65	Electrocatalytic properties of the polypyrrole/magnetite hybrid modified electrode towards the reduction of hydrogen peroxide in the presence of dissolved oxygen. Electrochimica Acta, 2012, 73, 53-58.	2.6	17
66	Controlled Photocatalytic Deposition of CdS Nanoparticles on Poly(3-hexylthiophene) Nanofibers: A Versatile Approach To Obtain Organic/Inorganic Hybrid Semiconductor Assemblies. Journal of Physical Chemistry C, 2015, 119, 28020-28027.	1.5	17
67	Controlled Photocatalytic Synthesis of Coreâ€“Shell SiC/Polyaniline Hybrid Nanostructures. Materials, 2016, 9, 201.	1.3	17
68	Synthesis and characterization of polypyrroleâ€“magnetiteâ€“vitamin B12 hybrid composite electrodes. Journal of Solid State Electrochemistry, 2010, 14, 339-346.	1.2	16
69	Electrodeposition of Hole-Transport Layer on Methylammonium Lead Iodide Film: A Strategy To Assemble Perovskite Solar Cells. Chemistry of Materials, 2018, 30, 4202-4206.	3.2	16
70	Solvation/desolvation during the redox transformation of poly(3-methylthiophene). Journal of Solid State Electrochemistry, 2005, 9, 330-336.	1.2	15
71	Application of classical and new, direct analytical methods for the elucidation of ion movements during the redox transformation of polypyrrole. Journal of Solid State Electrochemistry, 2010, 14, 1967-1973.	1.2	15
72	Photoelectrochemical Behavior of PEDOT/Nanocarbon Electrodes: Fundamentals and Structureâ€“Property Relationships. Journal of Physical Chemistry C, 2018, 122, 13682-13690.	1.5	15

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73	Impact of Reaction Parameters and Water Matrices on the Removal of Organic Pollutants by TiO2/LED and ZnO/LED Heterogeneous Photocatalysis Using 365 and 398 nm Radiation. Nanomaterials, 2022, 12, 5.	1.9	15
74	Electrosynthesis and comparative studies on carboxyl-functionalized polythiophene derivatives. Electrochimica Acta, 2011, 56, 3447-3453.	2.6	14
75	Flavin Derivatives with Tailored Redox Properties: Synthesis, Characterization, and Electrochemical Behavior. Chemistry - A European Journal, 2016, 22, 9209-9217.	1.7	14
76	Nitridation of one-dimensional tungsten oxide nanostructures: Changes in structure and photoactivity. Electrochimica Acta, 2017, 256, 299-306.	2.6	14
77	Solution Combustion Synthesis of Complex Oxide Semiconductors. International Journal of Self-Propagating High-Temperature Synthesis, 2018, 27, 129-140.	0.2	14
78	Development of polymerâ€“dopant interactions during electropolymerization, a key factor in determining the redox behaviour of conducting polymers. Journal of Solid State Electrochemistry, 2015, 19, 2891-2896.	1.2	13
79	Tuning the Excited-State Dynamics of CuI Films with Electrochemical Bias. ACS Energy Letters, 2019, 4, 702-708.	8.8	13
80	Fixation of laccase enzyme into polypyrrole, assisted by chemical interaction with modified magnetite nanoparticles: A facile route to synthesize stable electroactive bionanocomposite catalysts. Electrochimica Acta, 2014, 122, 282-288.	2.6	12
81	Electrochemical deposition of polyviologen-reduced graphene oxide nanocomposite thin films. Electrochimica Acta, 2017, 231, 279-286.	2.6	12
82	Photoâ€Electrochemical Conversion of CO₂ Under Concentrated Sunlight Enables Combination of High Reaction Rate and Efficiency. Advanced Energy Materials, 2022, 12, .	10.2	12
83	Magnetic hybrid modified electrodes, based on magnetite nanoparticle containing polyaniline and poly(3,4-ethylenedioxythiophene). Journal of Solid State Electrochemistry, 2011, 15, 2351-2359.	1.2	10
84	Fabrication of Î²-SiC quantum dots by photo-assisted electrochemical corrosion of bulk powders. Electrochemistry Communications, 2013, 37, 1-4.	2.3	10
85	Electrodeposition of Silver Vanadate Films: A Tale of Two Polymorphs. ChemPhysChem, 2019, 20, 2635-2646.	1.0	10
86	Electrocatalytic behavior of freely-diffusing and immobilized synthetic flavins in aqueous media. Catalysis Science and Technology, 2016, 6, 8441-8448.	2.1	9
87	Electrosynthesis and photoelectrochemical properties of polyaniline/SiC nanohybrid electrodes. Electrochimica Acta, 2017, 256, 73-80.	2.6	9
88	Microstructuration of poly(3-hexylthiophene) leads to bifunctional superhydrophobic and photoreactive surfaces. Chemical Communications, 2018, 54, 650-653.	2.2	9
89	The effect of nanostructure dimensionality on the photoelectrochemical properties of derived TiO2 films. Electrochimica Acta, 2021, 373, 137900.	2.6	9
90	The Mystery of Black TiO₂: Insights from Combined Surface Science and In Situ Electrochemical Methods. ACS Materials Au, 2021, 1, 157-168.	2.6	9

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91	Electrosynthesis and Properties of Crystalline and Phase-Pure Silver Orthovanadate. Journal of Physical Chemistry C, 2020, 124, 19980-19989.	1.5	8
92	Current Trends in Semiconductor Photoelectrochemistry. ACS Energy Letters, 2017, 2, 1425-1428.	8.8	7
93	New space for chemical discoveries. Nature Reviews Chemistry, 2017, 1, .	13.8	7
94	The Extreme Light Infrastructureâ€"Attosecond Light Pulse Source (ELI-ALPS) Project. Springer Series in Chemical Physics, 2017, , 181-218.	0.2	7
95	Structural Features Dictate the Photoelectrochemical Activities of Two-Dimensional MoSe₂ and WSe₂ Nanostructures. Journal of Physical Chemistry C, 2021, 125, 7701-7710.	1.5	7
96	Sacrificial Agent Gone Rogue: Electron-Acceptor-Induced Degradation of CsPbBr₃ Photocathodes. ACS Energy Letters, 2022, 7, 417-424.	8.8	7
97	CO₂reduction reactions: general discussion. Faraday Discussions, 2015, 183, 261-290.	1.6	6
98	Synthesis, characterization, and electrocatalytic properties of a custom-designed conjugated polymer with pyridine side chain. Electrochimica Acta, 2016, 217, 92-99.	2.6	6
99	Visible Light-Generated Antiviral Effect on Plasmonic Ag-TiO2-Based Reactive Nanocomposite Thin Film. Frontiers in Bioengineering and Biotechnology, 2021, 9, 709462.	2.0	6
100	Layer by layer growth of electroactive conducting polymer/magnetite hybrid assemblies. Synthetic Metals, 2013, 171, 62-68.	2.1	5
101	Electrochemical synthesis and characterization of poly(3-hexylthiophene)/single-walled carbon nanotube array hybrid materials. Journal of Solid State Electrochemistry, 2016, 20, 3179-3187.	1.2	5
102	Conducting polymer based multifunctional composite electrodes. Reaction Kinetics and Catalysis Letters, 2009, 96, 421-428.	0.6	4
103	Optimization of the photoactivity of conducting polymer covered ZnO nanorod composite electrodes. Journal of Solid State Electrochemistry, 2015, 19, 37-44.	1.2	4
104	Solar Photoelectroreduction of Nitrate Ions on PbI 2 /CuI Nanocomposite Electrodes. Solar Rrl, 2021, 5, 2000418.	3.1	4
105	Electrosynthesis of CdS/MoS₂ Using Electrodeposited MoS_x: A Combined Voltammetryâ€"Electrochemical Quartz Crystal Nanogravimetry Study. ACS Applied Energy Materials, 2021, 4, 7562-7570.	2.5	4
106	Study on the electrodeposition of organic and inorganic thermoelectric materials for composite preparation. Reaction Kinetics and Catalysis Letters, 2009, 96, 429-436.	0.6	3
107	The Effect of Trap States on the Optoelectronic Properties of Nanoporous Nickel Oxide. Journal of the Electrochemical Society, 2019, 166, H3265-H3270.	1.3	3
108	Role of f Electrons in the Optical and Photoelectrochemical Behavior of Ca(La_{1â€"x}Ce_x)₂S₄ (0 â‰¤ x â‰¤ 1). Inorganic Chemistry, 2019, 58, 4553-4560.	1.9	2

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109	Composition-Dependent Optical and Photoelectrochemical Behavior of Antimony Oxide Iodides. Journal of the Electrochemical Society, 2019, 166, H3202-H3207.	1.3	2
110	Capture agents, conversion mechanisms, biotransformations and biomimetics: general discussion. Faraday Discussions, 2015, 183, 463-487.	1.6	1
111	Tailoring the interfaces in conducting polymer composites by controlled polymerization. , 2017, , 101-134.		1
112	Energy Spotlight. ACS Energy Letters, 2021, 6, 277-279.	8.8	1
113	Electrodeposition of Inorganic Oxide/Nanocarbon Composites: Opportunities and Challenges. ChemElectroChem, 2016, 3, 176-176.	1.7	0
114	Energy Spotlight. ACS Energy Letters, 2020, 5, 2454-2455.	8.8	0
115	Energy Spotlight. ACS Energy Letters, 2021, 6, 2635-2637.	8.8	0