Flavio L Souza

List of Publications by Year
in descending order

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79 papers	1,580 citations	331642 21 h-index	361001 35 g-index
82 all docs	82 docs citations	82 times ranked	1932 citing authors

#	Article	IF	Citations
1	Nanostructured hematite thin films produced by spin-coating deposition solution: Application in water splitting. Solar Energy Materials and Solar Cells, 2009, 93, 362-368.	6.2	164
2	The influence of the film thickness of nanostructured Î±-Fe2O3 on water photooxidation. Physical Chemistry Chemical Physics, 2009, 11, 1215.	2.8	116
3	Highly oriented hematite nanorods arrays for photoelectrochemical water splitting. Journal of Power Sources, 2012, 205, 525-529.	7.8	89
4	Synthesis, growth mechanism, optical properties and catalytic activity of ZnO microcrystals obtained via hydrothermal processing. RSC Advances, 2017, 7, 24263-24281.	3.6	55
5	Vertically Oriented Iron Oxide Films Produced by Hydrothermal Process: Effect of Thermal Treatment on the Physical Chemical Properties. ACS Applied Materials & Interfaces, 2012, 4, 5515-5523.	8.0	51
6	A wind-powered BDD electrochemical oxidation process for the removal of herbicides. Journal of Environmental Management, 2015, 158, 36-39.	7.8	46
7	Effect of the addition of ZnO seeds on the electrical proprieties of ZnO-based varistors. Materials Chemistry and Physics, 2003, 80, 512-516.	4.0	39
8	Solâ€“gel nonhydrolytic synthesis of a hybrid organicâ€“inorganic electrolyte for application in lithium-ion devices. Solid State Ionics, 2004, 166, 83-88.	2.7	38
9	Zinc Oxide Flower-Like Nanostructures That Exhibit Enhanced Toxicology Effects in Cancer Cells. ACS Applied Materials & Interfaces, 2016, 8, 32699-32705.	8.0	38
10	Role of Cocatalysts on Hematite Photoanodes in Photoelectrocatalytic Water Splitting: Challenges and Future Perspectives. ChemCatChem, 2020, 12, 3156-3169.	3.7	35
11	Recent advances on solar water splitting using hematite nanorod film produced by purpose-built material methods. Journal of Materials Research, 2014, 29, 16-28.	2.6	33
12	Optimization of sulfonation process for the development of carbon-based catalyst from crambe meal via response surface methodology. Energy Conversion and Management, 2020, 217, 112975.	9.2	33
13	An intensity-modulated photocurrent spectroscopy study of the charge carrier dynamics of WO3/BiVO4 heterojunction systems. Solar Energy Materials and Solar Cells, 2020, 208, 110378.	6.2	31
14	Facile synthetic route for producing one-dimensional zinc oxide nanoflowers and characterization of their optical properties. Journal of Alloys and Compounds, 2013, 577, 158-164.	5.5	30
15	Morphological and structural evolution from akaganeite to hematite of nanorods monitored by ex situ synchrotron X-ray powder diffraction. RSC Advances, 2014, 4, 17753-17759.	3.6	30
16	Unraveling the Role of Sn Segregation in the Electronic Transport of Polycrystalline Hematite: Raising the Electronic Conductivity by Lowering the Grainâ€Boundary Blocking Effect. Advanced Electronic Materials, 2019, 5, 1900065.	5.1	30
17	Hybrid Organicâ^'Inorganic Polymer:Â A New Approach for the Development of Decoupled Polymer Electrolytes. Chemistry of Materials, 2005, 17, 4561-4563.	6.7	29
18	Strategies to improve the photoelectrochemical performance of hematite nanorod-based photoanodes. APL Materials, 2020, 8, .	5.1	29

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19	Enhancing the solar water splitting activity of TiO2 nanotube-array photoanode by surface coating with La-doped SrTiO3. Solar Energy Materials and Solar Cells, 2020, 208, 110428.	6.2	28
20	High temperature activation of hematite nanorods for sunlight driven water oxidation reaction. Physical Chemistry Chemical Physics, 2017, 19, 25025-25032.	2.8	23
21	Kinetic and thermodynamic effects of manganese as a densification aid in yttria-stabilized zirconia. Journal of the European Ceramic Society, 2018, 38, 1750-1759.	5.7	22
22	Discovering a selective semimetal element to increase hematite photoanode charge separation efficiency. Journal of Materials Chemistry A, 2019, 7, 16992-16998.	10.3	22
23	Hematite Surface Modification toward Efficient Sunlight-Driven Water Splitting Activity: The Role of Gold Nanoparticle Addition. Journal of Physical Chemistry C, 2020, 124, 6171-6179.	3.1	21
24	Tailoring hematite/FTO interfaces: New horizons for spin-coated hematite photoanodes targeting water splitting. Materials Letters, 2019, 254, 218-221.	2.6	20
25	Enhanced water oxidation efficiency of hematite thin films by oxygen-deficient atmosphere. Journal of Materials Research, 2015, 30, 3595-3604.	2.6	19
26	Multihierarchical electrodes based on titanate nanotubes and zinc oxide nanorods for photoelectrochemical water splitting. Journal of Materials Chemistry A, 2016, 4, 944-952.	10.3	19
27	Improving Thermodynamic Stability of nano-LiMn₂O₄ for Li-Ion Battery Cathode. Chemistry of Materials, 2021, 33, 3915-3925.	6.7	19
28	Anomalous current-voltage behavior of CaCu3Ti4O12 ceramics. Applied Physics Letters, 2008, 93, 182912.	3.3	17
29	Hematite Surface Activation by Chemical Addition of Tin Oxide Layer. ChemPhysChem, 2016, 17, 2710-2717.	2.1	17
30	Effect of thermal treatment on solidâ€“solid interface of hematite thin film synthesized by spin-coating deposition solution. Thin Solid Films, 2016, 604, 28-39.	1.8	17
31	Pseudobrookite Fe₂TiO₅ Nanoparticles Loaded with Earth-Abundant Nanosized NiO and Co₃O₄ Cocatalysts for Photocatalytic O₂ Evolution via Solar Water Splitting. ACS Applied Nano Materials, 2020, 3, 9303-9317.	5.0	17
32	Performance of wind-powered soil electroremediation process for the removal of 2,4-D from soil. Journal of Environmental Management, 2016, 171, 128-132.	7.8	16
33	Revealing the synergy of Sn insertion in hematite for nextâ€generation solar water splitting nanoceramics. International Journal of Ceramic Engineering & Science, 2020, 2, 204-227.	1.2	16
34	On the relevance of understanding and controlling the locations of dopants in hematite photoanodes for low-cost water splitting. Applied Physics Letters, 2021, 119, .	3.3	16
35	Dielectric characterization of microwave sintered lead zirconate titanate ceramics. Ceramics International, 2016, 42, 14423-14430.	4.8	14
36	Interface engineering of nanoceramic hematite photoelectrode for solar energy conversion. Journal of the American Ceramic Society, 2020, 103, 6833-6846.	3.8	14

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37	Solution chemistry back-contact FTO/hematite interface engineering for efficient photocatalytic water oxidation. Chinese Journal of Catalysis, 2022, 43, 1247-1257.	14.0	14
38	Enhancing Hematite Photoanode Activity for Water Oxidation by Incorporation of Reduced Graphene Oxide. ChemPhysChem, 2016, 17, 170-177.	2.1	13
39	Effect of microwave irradiation on hydrogen sorption properties of hand mixed MgH2 â€“ 10Âwt.% carbon fibers. Journal of Alloys and Compounds, 2016, 676, 1-8.	5.5	13
40	Unraveling the role of single layer graphene as overlayer on hematite photoanodes. Journal of Catalysis, 2019, 372, 109-118.	6.2	13
41	Unveiling the dopant segregation effect at hematite interfaces. Applied Physics Letters, 2021, 118, .	3.3	13
42	Structural and electrical characterization of dense lead zirconate titanate ceramics synthesized by the oxidant-peroxo wet-chemical route. Journal of Applied Physics, 2004, 96, 2169-2172.	2.5	12
43	Characterization of dense lead lanthanum titanate ceramics prepared from powders synthesized by the oxidant peroxo method. Materials Chemistry and Physics, 2010, 124, 1051-1056.	4.0	12
44	Zinc oxide flower-like synthesized under hydrothermal conditions. Thin Solid Films, 2013, 537, 97-101.	1.8	12
45	Thermal enhancement of water affinity on the surface of undoped hematite photoelectrodes. Solar Energy Materials and Solar Cells, 2016, 144, 395-404.	6.2	12
46	Synergetic effect of Sn addition and oxygen-deficient atmosphere to fabricate active hematite photoelectrodes for light-induced water splitting. Nanotechnology, 2017, 28, 454002.	2.6	12
47	Surface Fe vacancy defects on haematite and their role in light-induced water splitting in artificial photosynthesis. Physical Chemistry Chemical Physics, 2017, 19, 31410-31417.	2.8	12
48	Annealing control of hydrothermally grown hematite nanorods: Implication of structural changes and Cl concentration on weak ferromagnetism. Journal of Alloys and Compounds, 2019, 799, 83-88.	5.5	12
49	Engineering interfacial modification on nanocrystalline hematite photoanodes: A close look into the efficiency parameters. Solar Energy Materials and Solar Cells, 2020, 208, 110377.	6.2	12
50	All-electrochemically synthesized tin and nickel oxide-modified hematite as photo-electrocatalyst anodes for solar-driven water splitting. Journal of Catalysis, 2020, 391, 273-281.	6.2	12
51	Quenching of Photoactivity in Phthalocyanine Copper(II) -Titanate Nanotube Hybrid Systems. Journal of Physical Chemistry C, 2011, 115, 12082-12089.	3.1	11
52	Synthesis of SnS and ZnS Hollow Microarchitectures Decorated with Nanostructures and Their Photocatalytic Behavior for Dye Degradation. ChemistrySelect, 2018, 3, 3774-3780.	1.5	11
53	An intensity modulated photocurrent spectroscopy study of the role of titanium in thick hematite photoanodes. Applied Physics Letters, 2021, 119, .	3.3	11
54	Solid hybrid polyelectrolyte with high performance in electrochromic devices: Electrochemical stability and optical study. Solar Energy Materials and Solar Cells, 2007, 91, 1825-1830.	6.2	10

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55	Structural and dielectric characterization of praseodymium-modified lead titanate ceramics synthesized by the OPM route. Materials Chemistry and Physics, 2011, 130, 259-263.	4.0	8
56	Challenges and prospects about the graphene role in the design of photoelectrodes for sunlight-driven water splitting. RSC Advances, 2021, 11, 14374-14398.	3.6	8
57	UV-Light Effects on Cytochrome C Modulated by the Aggregation State of Phenothiazines. PLoS ONE, 2013, 8, e76857.	2.5	7
58	Sunlight-driven water splitting using hematite nanorod photoelectrodes. Anais Da Academia Brasileira De Ciencias, 2018, 90, 745-762.	0.8	7
59	Engineering hematite/plasmonic nanoparticle interfaces for efficient photoelectrochemical water splitting. Journal of Applied Physics, 2020, 128, 063103.	2.5	7
60	Lithium Ion Motion in a Hybrid Polymer: Confirmation of a Decoupled Polyelectrolyte. ChemPhysChem, 2007, 8, 1778-1781.	2.1	6
61	Largeâ€Area Plasmonic Substrate of Silverâ€Coated Iron Oxide Nanorod Arrays for Plasmonâ€Enhanced Spectroscopy. ChemPhysChem, 2013, 14, 1871-1876.	2.1	6
62	Binary Transition Metal NiFeO _x and CoFeO _x Cocatalysts Boost the Photodriven Water Oxidation over Fe ₂ TiO ₅ Nanoparticles. ChemNanoMat, 2022, 8, .	2.8	6
63	On electron loss lowering at hematite photoelectrode interfaces. Journal of the American Ceramic Society, 2023, 106, 79-92.	3.8	6
64	Performance of a single-phase hybrid and nanocomposite polyelectrolyte in classical electrochromic devices. Electrochimica Acta, 2007, 53, 1635-1642.	5.2	5
65	Ion Relaxation Dynamics in a Decoupled Hybrid Polyelectrolyte. ChemPhysChem, 2008, 9, 245-248.	2.1	5
66	Novel design of photocatalyst coaxial ferromagnetic core and semiconducting shell microwire architecture. Journal of Catalysis, 2019, 370, 61-69.	6.2	5
67	On the Effect of Thermal Processing on Sn Diffusion and Efficiency Enhancement in Hematite/FTO Photoanodes. ECS Journal of Solid State Science and Technology, 2022, 11, 043001.	1.8	5
68	Advances in Engineered Metal Oxide Thin Films by Low-Cost, Solution-Based Techniques for Green Hydrogen Production. Nanomaterials, 2022, 12, 1957.	4.1	5
69	New ultrasonic assisted co-precipitation for high surface area oxide based nanostructured materials. Reaction Chemistry and Engineering, 2018, 3, 244-250.	3.7	4
70	Photoactive multilayer WO3 electrode synthesized via dip-coating. Ceramics International, 2018, 44, 22983-22990.	4.8	4
71	Tailoring a Zinc Oxide Nanorod Surface by Adding an Earthâ€Abundant Cocatalyst for Induced Sunlight Water Oxidation. ChemPhysChem, 2020, 21, 476-483.	2.1	4
72	Ideal dopant to increase charge separation efficiency in hematite photoanodes: germanium. Journal of Materials Chemistry A, 2022, 10, 13456-13466.	10.3	4

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73	Latest Advances on the Columnar Nanostructure for Solar Water Splitting. , 2018, , 141-160.		3
74	Insights on Thickness-Dependent Charge Transfer Efficiency Modulated by Ultrasonic Treatment in Hematite Photoanodes. Journal of Physical Chemistry C, 2021, 125, 9981-9989.	3.1	3
75	Rapid microwave-assisted synthesis of zirconium aluminide. Materials Chemistry and Physics, 2018, 211, 249-257.	4.0	2
76	Sol-Gel Non-hydrolytic Synthesis of a Nanocomposite Electrolyte for Application in Lithium-ion Devices. Materials Research Society Symposia Proceedings, 2004, 822, S3.1.1.	0.1	0
77	Controlling the Activation Energy for Single-Ion Diffusion through a Hybrid Polyelectrolyte Matrix by Manipulating the Central Coordinate Semimetal Atom. Journal of Physical Chemistry Letters, 2019, 10, 7684-7689.	4.6	0
78	(Invited) Engineering Hematite Photoelectrodes Interfaces for Sunlight Water Oxidation Reaction. ECS Meeting Abstracts, 2019, , .	0.0	0
79	(Invited) Engineering Hematite Interfaces By Dual Modification for Sunlight Driven Water Oxidation Reaction. ECS Meeting Abstracts, 2020, MA2020-01, 1708-1708.	0.0	0