Stuart Licht

List of Publications by Year
in descending order

137 papers	6,382 citations	61857 43 h-index	74018 75 g-index
147 all docs	147 docs citations	147 times ranked	5112 citing authors

#	Article	IF	Citations
1	Controlled Growth of Unusual Nanocarbon Allotropes by Molten Electrolysis of CO2. Catalysts, 2022, 12, 125.	1.6	13
2	Controlled Transition Metal Nucleated Growth of Carbon Nanotubes by Molten Electrolysis of CO2. Catalysts, 2022, 12, 137.	1.6	8
3	CO₂ Utilization by Electrolytic Splitting to Carbon Nanotubes in Nonâ€Lithiated, Costâ€Effective, Molten Carbonate Electrolytes. Advanced Sustainable Systems, 2022, 6, .	2.7	6
4	Green and scalable separation and purification of carbon materials in molten salt by efficient high-temperature press filtration. Separation and Purification Technology, 2021, 255, 117719.	3.9	9
5	The green synthesis of exceptional braided, helical carbon nanotubes and nanospiral platelets made directly from CO2. Materials Today Chemistry, 2021, 22, 100529.	1.7	6
6	Efficient Electrocatalytic Synthesis of Ammonia from Water and Air in a Membraneâ€Free Cell: Confining the Iron Oxide Catalyst to the Cathode. European Journal of Inorganic Chemistry, 2020, 2020, 1428-1436.	1.0	6
7	Transformation of the greenhouse gas carbon dioxide to graphene. Journal of CO2 Utilization, 2020, 36, 288-294.	3.3	40
8	Calcium metaborate induced thin walled carbon nanotube syntheses from CO2 by molten carbonate electrolysis. Scientific Reports, 2020, 10, 15146.	1.6	13
9	Magnetic carbon nanotubes: Carbide nucleated electrochemical growth of ferromagnetic CNTs from CO2. Journal of CO2 Utilization, 2020, 40, 101218.	3.3	16
10	Revealing nitrogen-containing species in commercial catalysts used for ammonia electrosynthesis. Nature Catalysis, 2020, 3, 1055-1061.	16.1	73
11	One pot facile transformation of CO2 to an unusual 3-D nano-scaffold morphology of carbon. Scientific Reports, 2020, 10, 21518.	1.6	16
12	Carbon Nanoâ€Onions Made Directly from CO2by Molten Electrolysis for Greenhouse Gas Mitigation. Advanced Sustainable Systems, 2019, 3, 1900056.	2.7	24
13	Exploration of alkali cation variation on the synthesis of carbon nanotubes by electrolysis of CO2 in molten carbonates. Journal of CO2 Utilization, 2019, 34, 303-312.	3.3	37
14	Amplified CO2 reduction of greenhouse gas emissions with C2CNT carbon nanotube composites. Materials Today Sustainability, 2019, 6, 100023.	1.9	23
15	Recent Advances in Solar Thermal Electrochemical Process (STEP) for Carbon Neutral Products and High Value Nanocarbons. Accounts of Chemical Research, 2019, 52, 3177-3187.	7.6	55
16	Rechargeable Zinc Air Batteries and Highly Improved Performance through Potassium Hydroxide Addition to the Molten Carbonate Eutectic Electrolyte. Journal of the Electrochemical Society, 2018, 165, A149-A154.	1.3	22
17	Nano PdO Activated Iron Molten Air Battery. Journal of Physical Chemistry C, 2018, 122, 8109-8115.	1.5	5
18	Enhanced Iron Molten Air Battery Cycle Life and the Chemistry of the Nickel Oxide/Air Interface. Journal of the Electrochemical Society, 2018, 165, A235-A243.	1.3	7

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19	Transformation of the greenhouse gas CO2 by molten electrolysis into a wide controlled selection of carbon nanotubes. Journal of CO2 Utilization, 2017, 18, 335-344.	3.3	59
20	Co-production of cement and carbon nanotubes with a carbon negative footprint. Journal of CO2 Utilization, 2017, 18, 378-389.	3.3	32
21	A long cycle life, high coulombic efficiency iron molten air battery. Sustainable Energy and Fuels, 2017, 1, 474-481.	2.5	28
22	A novel rechargeable zinc-air battery with molten salt electrolyte. Journal of Power Sources, 2017, 342, 435-441.	4.0	51
23	Improved Cycle Iron Molten Air Battery Performance Using a Robust Fin Air Electrode. Journal of the Electrochemical Society, 2017, 164, A88-A92.	1.3	8
24	Photoelectrochemical Conversion Processes. , 2017, , 779-798.		0
25	Data on SEM, TEM and Raman Spectra of doped, and wool carbon nanotubes made directly from CO 2 by molten electrolysis. Data in Brief, 2017, 14, 592-606.	0.5	21
26	Thermal Modeling for High Temperature Electrolysis of Lithium Carbonate with Carbon Dioxide Sequestration. , 2017, , .		0
27	Electrochemical synthesis of ammonia directly from N₂ and water over iron-based catalysts supported on activated carbon. Green Chemistry, 2017, 19, 298-304.	4.6	116
28	Carbon nanotube wools made directly from CO2 by molten electrolysis: Value driven pathways to carbon dioxide greenhouse gas mitigation. Materials Today Energy, 2017, 5, 230-236.	2.5	51
29	Tracking airborne CO2 mitigation and low cost transformation into valuable carbon nanotubes. Scientific Reports, 2016, 6, 27760.	1.6	50
30	Comparison of Alternative Molten Electrolytes for Water Splitting to Generate Hydrogen Fuel. Journal of the Electrochemical Society, 2016, 163, F1162-F1168.	1.3	16
31	One-pot synthesis of nanostructured carbon materials from carbon dioxide via electrolysis in molten carbonate salts. Carbon, 2016, 106, 208-217.	5.4	105
32	Carbon Nanotubes Produced from Ambient Carbon Dioxide for Environmentally Sustainable Lithium-Ion and Sodium-Ion Battery Anodes. ACS Central Science, 2016, 2, 162-168.	5.3	147
33	Solar thermoelectric field plus photocatalysis for efficient organic synthesis exemplified by toluene to benzoic acid. Applied Catalysis B: Environmental, 2016, 193, 151-159.	10.8	43
34	Carbon Dioxide Emission Reduction. , 2016, , 421-440.		0
35	A New Technology for Efficient, High Yield Carbon Dioxide and Water Transformation to Methane by Electrolysis in Molten Salts. Advanced Materials Technologies, 2016, 1, 1600092.	3.0	37
36	Sustainable Electrochemical Synthesis of Large Grain- or Catalyst-Sized Iron. Journal of Sustainable Metallurgy, 2016, 2, 405-415.	1.1	5

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37	The adoption and mechanism of KIO4 for redox-equilibrated stabilization of FeO4 2âˆ’ as an equalizer in water. Ionics, 2016, 22, 1967-1972.	1.2	5
38	Thermodynamic assessment of CO2 to carbon nanofiber transformation for carbon sequestration in a combined cycle gas or a coal power plant. Energy Conversion and Management, 2016, 122, 400-410.	4.4	48
39	How does an amalgamated Ni cathode affect carbon nanotube growth? A density functional theory study. RSC Advances, 2016, 6, 27191-27196.	1.7	14
40	Higher Capacity, Improved Conductive Matrix VB₂/Air Batteries. Journal of the Electrochemical Society, 2016, 163, A781-A784.	1.3	9
41	Solar Fuels: A Oneâ€Pot Synthesis of Hydrogen and Carbon Fuels from Water and Carbon Dioxide (Adv.) Tj ETQq1 1 0.784314 rgBT /Ov	10.2	5
42	Solar Fuel: Sungas Instead of Syngas: Efficient Coproduction of CO and H2 with a Single Beam of Sunlight (Adv. Sci. 11/2015). Advanced Science, 2015, 2, .	5.6	0
43	Sungas Instead of Syngas: Efficient Coproduction of CO and H₂ with a Single Beam of Sunlight. Advanced Science, 2015, 2, 1500260.	5.6	27
44	One-Pot Synthesis of Carbon Nanofibers from CO₂. Nano Letters, 2015, 15, 6142-6148.	4.5	209
45	Towards efficient solar STEP synthesis of benzoic acid: Role of graphite electrode. Solar Energy, 2015, 113, 303-312.	2.9	13
46	High Energy Capacity TiB₂/VB₂Composite Metal Boride Air Battery. Journal of the Electrochemical Society, 2015, 162, A432-A436.	1.3	14
47	The Minimum Electrolytic Energy Needed To Convert Carbon Dioxide to Carbon by Electrolysis in Carbonate Melts. Journal of Physical Chemistry C, 2015, 119, 23342-23349.	1.5	70
48	Critical advances for the iron molten air battery: a new lowest temperature, rechargeable, ternary electrolyte domain. Journal of Materials Chemistry A, 2015, 3, 21039-21043.	5.2	15
49	A Oneâ€Pot Synthesis of Hydrogen and Carbon Fuels from Water and Carbon Dioxide. Advanced Energy Materials, 2015, 5, 1401791.	10.2	23
50	The Net Discharge Mechanism of the VB₂/Air Battery. Journal of the Electrochemical Society, 2015, 162, A192-A197.	1.3	23
51	STEP organic synthesis: an efficient solar, electrochemical process for the synthesis of benzoic acid. Green Chemistry, 2014, 16, 4758-4766.	4.6	25
52	A low temperature iron molten air battery. Journal of Materials Chemistry A, 2014, 2, 10577-10580.	5.2	22
53	Advances in Understanding the Mechanism and Improved Stability of the Synthesis of Ammonia from Air and Water in Hydroxide Suspensions of Nanoscale Fe₂O₃. Inorganic Chemistry, 2014, 53, 10042-10044.	1.9	52
54	Evaluation of properties and performance of nanoscopic materials in vanadium diboride/air batteries. Journal of Power Sources, 2013, 239, 244-252.	4.0	26

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55	Molten air â€“ a new, highest energy class of rechargeable batteries. Energy and Environmental Science, 2013, 6, 3646.	15.6	38
56	Critical STEP advances for sustainable iron production. Green Chemistry, 2013, 15, 881.	4.6	27
57	STEP carbon capture â€“ The barium advantage. Journal of CO2 Utilization, 2013, 2, 58-63.	3.3	54
58	Studying the Reversibility of Multielectron Charge Transfer in Fe(VI) Cathodes Utilizing X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2013, 117, 19875-19884.	1.5	2
59	Solar Driven Thermal Electrochemical Process (STEP) Wastewater Treatment with Synergistic Production of Hydrogen. ECS Electrochemistry Letters, 2013, 2, H34-H36.	1.9	14
60	Nano-VB2 Synthesis from Elemental Vanadium and Boron: Nano-VB2 Anodeâˆ•Air Batteries. Electrochemical and Solid-State Letters, 2012, 15, A12.	2.2	23
61	STEP cement: Solar Thermal Electrochemical Production of CaO without CO2 emission. Chemical Communications, 2012, 48, 6019.	2.2	68
62	STEP Wastewater Treatment: A Solar Thermal Electrochemical Process for Pollutant Oxidation. ChemSusChem, 2012, 5, 2000-2010.	3.6	28
63	STEP Iron, a Chemistry of Iron Formation without CO₂ Emission: Molten Carbonate Solubility and Electrochemistry of Iron Ore Impurities. Journal of Physical Chemistry C, 2011, 115, 25138-25147.	1.5	62
64	Nanoparticle Facilitated Charge Transfer and Voltage of a High Capacity VB2 Anode. Electrochemical and Solid-State Letters, 2011, 14, A83.	2.2	17
65	STEPâ€”A Solar Chemical Process to End Anthropogenic Global Warming. II: Experimental Results. Journal of Physical Chemistry C, 2011, 115, 11803-11821.	1.5	54
66	Chemical mechanism of the high solubility pathway for the carbon dioxide free production of iron. Chemical Communications, 2011, 47, 3081.	2.2	42
67	Super-iron nanoparticles with facile cathodic charge transfer. Electrochemistry Communications, 2011, 13, 909-912.	2.3	15
68	Efficient Solarâ€Ðriven Synthesis, Carbon Capture, and Desalinization, STEP: Solar Thermal Electrochemical Production of Fuels, Metals, Bleach. Advanced Materials, 2011, 23, 5592-5612.	11.1	119
69	STEP Decrease of Anthropogenic CO2: Solar Thermal Electrochemical Production of Energetic Molecules, A Different Solar Energy Conversion Process. ECS Transactions, 2011, 35, 25-30.	0.3	1
70	Efficient STEP (solar thermal electrochemical photo) production of hydrogen â€“ an economic assessment. International Journal of Hydrogen Energy, 2010, 35, 10867-10882.	3.8	45
71	A High Capacity Li-Ion Cathode: The Fe(III/VI) Super-Iron Cathode. Energies, 2010, 3, 960-972.	1.6	25
72	A New Solar Carbon Capture Process: Solar Thermal Electrochemical Photo (STEP) Carbon Capture. Journal of Physical Chemistry Letters, 2010, 1, 2363-2368.	2.1	138

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73	High solubility pathway for the carbon dioxide free production of iron. Chemical Communications, 2010, 46, 7004.	2.2	49
74	SECONDARY BATTERIES | Super-Iron Batteries. , 2009, , 262-284.		2
75	STEP (Solar Thermal Electrochemical Photo) Generation of Energetic Molecules: A Solar Chemical Process to End Anthropogenic Global Warming. Journal of Physical Chemistry C, 2009, 113, 16283-16292.	1.5	93
76	Enhancement of Reversible Nonaqueous Fe(III/VI) Cathodic Charge Transfer. Journal of Physical Chemistry C, 2009, 113, 9884-9891.	1.5	18
77	Advances in electrochemical Fe(VI) synthesis and analysis. Journal of Applied Electrochemistry, 2008, 38, 731-742.	1.5	31
78	Recent advances in synthesis and analysis of Fe(VI) cathodes: solution phase and solid-state Fe(VI) syntheses, reversible thin-film Fe(VI) synthesis, coating-stabilized Fe(VI) synthesis, and Fe(VI) analytical methodologies. Journal of Solid State Electrochemistry, 2008, 12, 1523-1540.	1.2	13
79	Recent Advances in Fe(VI) Synthesis. ACS Symposium Series, 2008, , 2-51.	0.5	22
80	Recent Advances in Fe(VI) Charge Storage and Super-Iron Batteries. ACS Symposium Series, 2008, , 197-256.	0.5	3
81	Electrochemical Fe(VI) Water Purification and Remediation. ACS Symposium Series, 2008, , 268-291.	0.5	3
82	PHOTOELECTROCHEMICAL STORAGE CELLS. Series on Photoconversion of Solar Energy, 2008, , 591-632.	0.2	2
83	The Super-Iron Boride Battery. Journal of the Electrochemical Society, 2008, 155, A297.	1.3	23
84	Stabilized Alkaline Fe(VI) Charge Transfer. Journal of the Electrochemical Society, 2008, 155, A1.	1.3	17
85	A Novel High Capacity, Environmental Benign Energy Storage System: Super-iron Boride Battery. Materials Research Society Symposia Proceedings, 2007, 1041, 1.	0.1	0
86	A novel alkaline redox couple: chemistry of the Fe6+/B2? super-iron boride battery. Chemical Communications, 2007, , 2753.	2.2	32
87	Cathodic chemistry of high performance Zr coated alkaline materials. Chemical Communications, 2006, , 4341.	2.2	37
88	Study of Various (â€œSuper Ironâ€) MFeO[sub 4] Compounds in Li Salt Solutions as Potential Cathode Materials for Li Batteries. Journal of the Electrochemical Society, 2006, 153, A32.	1.3	24
89	Conductive-Matrix-Mediated Alkaline Fe(III/VI) Charge Transfer:Â Three-Electron Storage, Reversible Super-Iron Thin Film Cathodes. Journal of Physical Chemistry B, 2006, 110, 12394-12403.	1.2	25
90	Demonstration of a Novel Alkaline Battery Cathode Material: Periodate Salts. Materials Research Society Symposia Proceedings, 2006, 973, 1.	0.1	1

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91	Synthesis and analysis of Ag2FeO4 Fe(VI) ferrate super-iron cathodes. Electrochemistry Communications, 2005, 7, 931-936.	2.3	36
92	Electrochemical Alkaline Fe(VI) Water Purification and Remediation. Environmental Science & Technology, 2005, 39, 8071-8076.	4.6	51
93	Thermochemical solar hydrogen generation. Chemical Communications, 2005, , 4635.	2.2	38
94	The Fundamental Conductivity and Resistivity of Water. Electrochemical and Solid-State Letters, 2005, 8, E16.	2.2	181
95	Toward Efficient Electrochemical Synthesis of Fe(VI) Ferrate and Super-Iron Battery Compounds. Journal of the Electrochemical Society, 2004, 151, A31.	1.3	43
96	Cathodic Charge Transfer and Analysis of Cs[sub 2]FeO[sub 4], K[sub 2]FeO[sub 4], and Mixed Alkali Fe(VI) Ferrate Super-irons. Journal of the Electrochemical Society, 2004, 151, A1147.	1.3	35
97	Rechargeable Fe(iii/vi) super-iron cathodes. Chemical Communications, 2004, , 628.	2.2	41
98	Electrochemical potential tuned solar water splitting. Chemical Communications, 2003, , 3006.	2.2	42
99	Solar Water Splitting To Generate Hydrogen Fuel:Â Photothermal Electrochemical Analysis. Journal of Physical Chemistry B, 2003, 107, 4253-4260.	1.2	82
100	Reversible Behavior of K[sub 2]Fe(VI)O[sub 4] in Aqueous Media. Electrochemical and Solid-State Letters, 2003, 6, A260.	2.2	15
101	Silver Mediation of Fe(VI) Charge Transfer:Â Activation of the K2FeO4Super-iron Cathode. Journal of Physical Chemistry B, 2002, 106, 5947-5955.	1.2	52
102	Energetics of a Zincâ^'Sulfur Fuel Cell. Journal of Physical Chemistry B, 2002, 106, 2989-2995.	1.2	34
103	Efficient solar generation of hydrogen fuel â€" a fundamental analysis. Electrochemistry Communications, 2002, 4, 790-795.	2.3	33
104	Rapid chemical synthesis of the barium ferrate super-iron Fe (VI) compound, BaFeO4. Journal of Power Sources, 2002, 109, 67-70.	4.0	40
105	Fe(VI) Catalyzed Manganese Redox Chemistry:Â Permanganate and Super-Iron Alkaline Batteries. Journal of Physical Chemistry B, 2001, 105, 11933-11936.	1.2	37
106	Multiple Band Gap Semiconductor/Electrolyte Solar Energy Conversion. Journal of Physical Chemistry B, 2001, 105, 6281-6294.	1.2	146
107	Chemical synthesis of battery grade super-iron barium and potassium Fe(VI) ferrate compounds. Journal of Power Sources, 2001, 99, 7-14.	4.0	63
108	Analysis of ferrate(VI) compounds and super-iron Fe(VI) battery cathodes: FTIR, ICP, titrimetric, XRD, UV/VIS, and electrochemical characterization. Journal of Power Sources, 2001, 101, 167-176.	4.0	116

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109	Efficient Solar Water Splitting, Exemplified by RuO2-Catalyzed AlGaAs/Si Photoelectrolysis. Journal of Physical Chemistry B, 2000, 104, 8920-8924.	1.2	364
110	Light invariant, efficient, multiple band gap AlGaAs/Si/metal hydride solar cell. Applied Physics Letters, 1999, 74, 4055-4057.	1.5	47
111	Energetic Iron(VI) Chemistry: The Super-Iron Battery. Science, 1999, 285, 1039-1042.	6.0	221
112	Nonaqueous Phase Fe(VI) Electrochemical Storage and Discharge of Super-Iron/Lithium Primary Batteries. Electrochemical and Solid-State Letters, 1999, 3, 209.	2.2	44
113	Ultrahigh Specific Power Electrochemistry, Exemplified by Al/MnO4-and Cd/AgO Redox Chemistry. Journal of Physical Chemistry B, 1998, 102, 6780-6786.	1.2	14
114	Photoelectrochemical Investigation of Fullerenes. Fullerenes, Nanotubes, and Carbon Nanostructures, 1998, 6, 125-136.	0.6	1
115	The Low Current Domain of the Aluminum/Sulfur Battery. Journal of the Electrochemical Society, 1997, 144, 948-955.	1.3	18
116	Aluminum/Sulfur Battery Discharge in the High Current Domain. Journal of the Electrochemical Society, 1997, 144, L133-L136.	1.3	23
117	Disproportionation of Aqueous Sulfur and Sulfide:Â Kinetics of Polysulfide Decomposition. Journal of Physical Chemistry B, 1997, 101, 2540-2545.	1.2	77
118	Aluminum Anodic Behavior in Aqueous Sulfur Electrolytes. Journal of Physical Chemistry B, 1997, 101, 4959-4965.	1.2	18
119	A Light Addressable Photoelectrochemical Cyanide Sensor. Analytical Chemistry, 1996, 68, 954-959.	3.2	47
120	Flat Band Variation of n-Cadmium Chalcogenides in Aqueous Cyanide. The Journal of Physical Chemistry, 1996, 100, 9082-9087.	2.9	9
121	A High Energy and Power Novel Aluminum/Nickel Battery. Journal of the Electrochemical Society, 1995, 142, L179-L182.	1.3	29
122	Aqueous Polyiodide Spectroscopy and Equilibria and Its Effect on nâ€‰â€ â€‰WSe2 Photoelectrochemistry. Journal of the Electrochemical Society, 1995, 142, 845-849.	1.3	14
123	Solutionâ€Modified nâ€‰â€â€‰GaAsâ€‰/â€‰Aqueous Polyselenide Photoelectrochemistry. Journal of the Electrochemical Society, 1995, 142, 1539-1545.	1.3	18
124	Potential Enhancement of Polyiodide Redox Couples via Solution Modification. Journal of the Electrochemical Society, 1995, 142, L129-L132.	1.3	19
125	Speciation Analysis of Aqueous Polyselenide Solutions. Journal of the Electrochemical Society, 1995, 142, 1546-1551.	1.3	44
126	Novel Aqueous Aluminum/Sulfur Batteries. Journal of the Electrochemical Society, 1993, 140, L4-L6.	1.3	66

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127	Rational Electrolyte Modification of nâ€‰â€â€‰CdSeâ€‰/â€‰â€‰(â€‰â€‰[â€‰KFeâ€‰(â€‰â€‰CNâ€‰â€‰)â€‰6â€‰] Electrochemical Society, 1992, 139, L23-L26.	1.3	18
128	A Novel Aqueous Aluminum/Ferricyanide Battery. Journal of the Electrochemical Society, 1992, 139, L109-L111.	1.3	23
129	Conductometric analysis of the second acid dissociation constant of H2S in highly concentrated aqueous media. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 318, 111-129.	0.3	42
130	Efficient photoelectrochemical solar cells from electrolyte modification. Nature, 1990, 345, 330-333.	13.7	90
131	Aqueous Solubilities, Solubility Products and Standard Oxidationâ€Reduction Potentials of the Metal Sulfides. Journal of the Electrochemical Society, 1988, 135, 2971-2975.	1.3	146
132	A light-variation insensitive high efficiency solar cell. Nature, 1987, 326, 863-864.	13.7	138
133	A description of energy conversion in photoelectrochemical solar cells. Nature, 1987, 330, 148-151.	13.7	87
134	Combined solution effects yield stable thin-film cadmium selenide telluride/polysulfide photoelectrochemical solar cells. The Journal of Physical Chemistry, 1986, 90, 1096-1099.	2.9	33
135	pH Measurement in Concentrated Alkaline Solutions. Analytical Chemistry, 1985, 57, 514-519.	3.2	58
136	Solar Thermal and Efficient Solar Thermal/Electrochemical Photo Hydrogen Generation. , 0, , 641-664.		2
137	Photoelectrochemistry and hybrid solar conversion. , 0, , 692-710.		0