

Leigh R Sheppard

List of Publications by Year in descending order

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69
papers

2,738
citations

279487

23
h-index

182168

51
g-index

75
all docs

75
docs citations

75
times ranked

3820
citing authors

#	ARTICLE	IF	CITATIONS
1	Chromium doping of Ta ₃ N ₅ thin films via thermal nitridation of sputtered tantalum oxide films. <i>Materials Chemistry and Physics</i> , 2021, 258, 123838.	2.0	2
2	Mo-doped, Cr-Doped, and Mo-Cr codoped TiO ₂ thin-film photocatalysts by comparative sol-gel spin coating and ion implantation. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 12961-12980.	3.8	13
3	Contamination of TiO ₂ thin films spin coated on borosilicate and rutile substrates. <i>Journal of Materials Science</i> , 2020, 55, 3774-3794.	1.7	13
4	Improvement of flow strength and scratch resistance of Ti/Cu nanocrystalline metal multilayer thin films by tailoring layer thickness and modulation ratio. <i>Surface and Coatings Technology</i> , 2020, 404, 126461.	2.2	9
5	TiO ₂ -Based homojunction photo-electrode for solar-driven water splitting. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9386-9396.	3.8	21
6	Contamination of TiO ₂ thin films spin coated on rutile and soda-lime-silica substrates. <i>Journal of Materials Science</i> , 2020, 55, 8061-8087.	1.7	5
7	Chemical Synthesis and High-Pressure Reaction of Nb ⁵⁺ Monodoped Rutile TiO ₂ Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12808-12815.	1.5	6
8	Reactive sputtered Ti _x Nb _y N _z thin films. I. Basic processing relationships. <i>Materials Chemistry and Physics</i> , 2019, 224, 308-313.	2.0	7
9	Reactive sputtered Ti _x Nb _y N coatings. II. Effect of common deposition parameters. <i>Materials Chemistry and Physics</i> , 2019, 224, 320-327.	2.0	8
10	Manipulation of Charge Transport by Metallic V ₁₃ O ₁₆ Decorated on Bismuth Vanadate Photoelectrochemical Catalyst. <i>Advanced Materials</i> , 2019, 31, e1807204.	11.1	57
11	Length-scale-dependent nanoindentation creep behaviour of Ti/Al multilayers by magnetron sputtering. <i>Materials Characterization</i> , 2018, 139, 165-175.	1.9	20
12	Effect of Oxygen on Sputtered Tantalum Nitride Thin Films for Photoelectrochemical Water Splitting. <i>Microscopy and Microanalysis</i> , 2018, 24, 1546-1547.	0.2	2
13	Contamination of TiO ₂ thin films spin coated on rutile and fused silica substrates. <i>Surface and Coatings Technology</i> , 2018, 354, 369-382.	2.2	18
14	Comparative study on plasticity and fracture behaviour of Ti/Al multilayers. <i>Tribology International</i> , 2018, 126, 344-351.	3.0	8
15	The Formation of Defect Pairs for Highly Efficient Visible-Light Catalysts. <i>Advanced Materials</i> , 2017, 29, 1605123.	11.1	43
16	Oriented epitaxial TiO ₂ nanowires for water splitting. <i>Nanotechnology</i> , 2017, 28, 265602.	1.3	7
17	Plastic behaviour of high-strength lightweight Al/Ti multilayered films. <i>Journal of Materials Science</i> , 2017, 52, 13956-13965.	1.7	9
18	Ultra-high specific strength and deformation behavior of nanostructured Ti/Al multilayers. <i>Journal Physics D: Applied Physics</i> , 2017, 50, 365302.	1.3	8

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19	A Sinusoidally Architected Helicoidal Biocomposite. <i>Advanced Materials</i> , 2016, 28, 6835-6844.	11.1	158
20	X-Ray Mapping of an Impact-Resistant Crustacean-Derived Biocomposite. <i>Microscopy and Microanalysis</i> , 2016, 22, 98-99.	0.2	1
21	Effect of tungsten-doping on the properties and photocatalytic performance of titania thin films on glass substrates. <i>Journal of the Taiwan Institute of Chemical Engineers</i> , 2016, 67, 202-210.	2.7	16
22	Aluminum and Tantalum Doping of Sputtered TiO ₂ Thin Films. <i>Microscopy and Microanalysis</i> , 2015, 21, 1799-1800.	0.2	0
23	Elemental and Phase Analysis of the Stomatopod Dactyl Club by X-Ray Mapping. <i>Microscopy and Microanalysis</i> , 2015, 21, 2007-2008.	0.2	1
24	Tantalum Segregation in Ta-Doped TiO ₂ and the Related Impact on Charge Separation during Illumination. <i>Journal of Physical Chemistry C</i> , 2015, 119, 392-400.	1.5	19
25	Tantalum Enrichment in Tantalum-Doped Titanium Dioxide. <i>Journal of the American Ceramic Society</i> , 2014, 97, 3793-3799.	1.9	17
26	Study of gamma irradiation effect on commercial TiO ₂ photocatalyst. <i>Applied Radiation and Isotopes</i> , 2014, 89, 25-29.	0.7	23
27	Niobium Surface Segregation in Polycrystalline Niobium-Doped Titanium Dioxide. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3407-3413.	1.5	14
28	Solute Diffusion of Platinum in Rutile Titanium Dioxide. <i>Journal of the American Ceramic Society</i> , 2013, 96, 407-411.	1.9	5
29	The Impact of Niobium Surface Segregation on Charge Separation in Niobium-Doped Titanium Dioxide. <i>Journal of Physical Chemistry C</i> , 2012, 116, 20923-20929.	1.5	19
30	Surface photovoltage studies of nonstoichiometric rutile titanium dioxide. <i>Applied Physics Letters</i> , 2010, 96, 072104.	1.5	9
31	Niobium diffusion in niobium-doped titanium dioxide. <i>Journal of Solid State Electrochemistry</i> , 2009, 13, 1115-1121.	1.2	11
32	Dynamics of TiO ₂ -based photoelectrochemical cell. <i>Ionics</i> , 2009, 15, 671-679.	1.2	2
33	Optical properties of anatase and rutile titanium dioxide: Ab initio calculations for pure and anion-doped material. <i>Journal of Physics and Chemistry of Solids</i> , 2008, 69, 1820-1828.	1.9	100
34	Effect of cooling on electrical conductivity of TiO ₂ . <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 1816-1827.	0.7	8
35	Defect Chemistry of Titanium Dioxide. Application of Defect Engineering in Processing of TiO ₂ -Based Photocatalysts. <i>Journal of Physical Chemistry C</i> , 2008, 112, 5275-5300.	1.5	525
36	Electrical Properties of Niobium-Doped Titanium Dioxide. 3. Thermoelectric Power. <i>Journal of Physical Chemistry C</i> , 2008, 112, 611-617.	1.5	27

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37	Effect of Prolonged Oxidation on Semiconducting Properties of Titanium Dioxide. Journal of Physical Chemistry C, 2008, 112, 13248-13257.	1.5	30
38	Defect Chemistry and Electrical Properties of Titanium Dioxide. 1. Defect Diagrams. Journal of Physical Chemistry C, 2008, 112, 590-601.	1.5	27
39	Mobility of Electronic Charge Carriers in Titanium Dioxide. Journal of Physical Chemistry C, 2008, 112, 12981-12987.	1.5	67
40	Defect Chemistry and Electrical Properties of Titanium Dioxide. 2. Effect of Aliovalent Ions. Journal of Physical Chemistry C, 2008, 112, 602-610.	1.5	24
41	Charge Transport in Cr-Doped Titanium Dioxide. Journal of Physical Chemistry C, 2008, 112, 7255-7262.	1.5	17
42	Reactivity of Titanium Dioxide with Oxygen at Room Temperature and the Related Charge Transfer. Journal of the American Chemical Society, 2008, 130, 9984-9993.	6.6	45
43	Photoreactivity models for titanium dioxide with water. Energy Materials, 2008, 3, 158-168.	0.1	1
44	Materials for hydrogen energy. Advances in Applied Ceramics, 2007, 106, 1-1.	0.6	3
45	Reactivity of TiO ₂ with water and oxygen: surface science perspective. Advances in Applied Ceramics, 2007, 106, 49-56.	0.6	5
46	Determination of niobium diffusion in titania and zirconia using secondary ion mass spectrometry. Advances in Applied Ceramics, 2007, 106, 89-94.	0.6	7
47	Development and basic study of TiO ₂ coatings. Advances in Applied Ceramics, 2007, 106, 45-48.	0.6	1
48	Materials for photoelectrochemical energy conversion. Advances in Applied Ceramics, 2007, 106, 9-20.	0.6	28
49	Niobium segregation in TiO ₂ . Advances in Applied Ceramics, 2007, 106, 82-88.	0.6	14
50	Effect of Grain Boundaries on Semiconducting Properties of TiO ₂ at Elevated Temperatures. Journal of Physical Chemistry C, 2007, 111, 9769-9778.	1.5	39
51	Bulk Diffusion of Niobium in Single-Crystal Titanium Dioxide. Journal of Physical Chemistry B, 2007, 111, 8126-8130.	1.2	24
52	Ab initio electronic structure calculation of oxygen vacancies in rutile titanium dioxide. Solid State Ionics, 2007, 178, 319-325.	1.3	34
53	Titanium dioxide for solar-hydrogen I. Functional properties. International Journal of Hydrogen Energy, 2007, 32, 2609-2629.	3.8	205
54	Titanium dioxide for solar-hydrogen II. Defect chemistry. International Journal of Hydrogen Energy, 2007, 32, 2630-2643.	3.8	97

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55	Titanium dioxide for solar-hydrogen III: Kinetic effects at elevated temperatures. International Journal of Hydrogen Energy, 2007, 32, 2644-2650.	3.8	11
56	Titanium dioxide for solar-hydrogen IV. Collective and local factors in photoreactivity. International Journal of Hydrogen Energy, 2007, 32, 2651-2659.	3.8	20
57	Electrical Properties of Niobium-Doped Titanium Dioxide. 2. Equilibration Kinetics. Journal of Physical Chemistry B, 2006, 110, 22455-22461.	1.2	17
58	TiO ₂ Surface Active Sites for Water Splitting. Journal of Physical Chemistry B, 2006, 110, 18492-18495.	1.2	159
59	Electrical Properties of Niobium-Doped Titanium Dioxide. 1. Defect Disorder. Journal of Physical Chemistry B, 2006, 110, 22447-22454.	1.2	64
60	Effect of niobium segregation on surface properties of titanium dioxide. , 2006, , .		4
61	Metallic TiO ₂ . Physica Status Solidi (A) Applications and Materials Science, 2006, 203, R85-R87.	0.8	13
62	Effect of niobium on the structure of titanium dioxide thin films. Thin Solid Films, 2006, 510, 119-124.	0.8	36
63	Chemical diffusion in metal oxides. Example of TiO ₂ . Ionics, 2006, 12, 227-243.	1.2	14
64	Reactivity at the oxygen/titania interface and the related charge transfer. Ionics, 2006, 12, 247-251.	1.2	3
65	Solar-hydrogen: Environmentally safe fuel for the future. International Journal of Hydrogen Energy, 2005, 30, 521-544.	3.8	345
66	Solar-hydrogen: Unresolved problems in solid-state science. Solar Energy, 2005, 78, 593-602.	2.9	102
67	Defect disorder, transport and photoelectrochemical properties of TiO ₂ . , 2005, , 84-119.		11
68	Charge transport in polycrystalline titanium dioxide. Journal of Physics and Chemistry of Solids, 2003, 64, 1089-1095.	1.9	28
69	Development of Novel Photoelectrode Materials with Improved Charge Separation Properties. Advanced Materials Research, 0, 975, 224-229.	0.3	2