

# Leigh R Sheppard

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8880238/publications.pdf>

Version: 2024-02-01

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	Defect Chemistry of Titanium Dioxide. Application of Defect Engineering in Processing of TiO <sub>2</sub> -Based Photocatalysts. Journal of Physical Chemistry C, 2008, 112, 5275-5300.	1.5	525
2	Solar-hydrogen: Environmentally safe fuel for the future. International Journal of Hydrogen Energy, 2005, 30, 521-544.	3.8	345
3	Titanium dioxide for solar-hydrogen I. Functional properties. International Journal of Hydrogen Energy, 2007, 32, 2609-2629.	3.8	205
4	TiO <sub>2</sub> Surface Active Sites for Water Splitting. Journal of Physical Chemistry B, 2006, 110, 18492-18495.	1.2	159
5	A Sinusoidally Architected Helicoidal Biocomposite. Advanced Materials, 2016, 28, 6835-6844.	11.1	158
6	Solar-hydrogen: Unresolved problems in solid-state science. Solar Energy, 2005, 78, 593-602.	2.9	102
7	Optical properties of anatase and rutile titanium dioxide: Ab initio calculations for pure and anion-doped material. Journal of Physics and Chemistry of Solids, 2008, 69, 1820-1828.	1.9	100
8	Titanium dioxide for solar-hydrogen II. Defect chemistry. International Journal of Hydrogen Energy, 2007, 32, 2630-2643.	3.8	97
9	Mobility of Electronic Charge Carriers in Titanium Dioxide. Journal of Physical Chemistry C, 2008, 112, 12981-12987.	1.5	67
10	Electrical Properties of Niobium-Doped Titanium Dioxide. 1. Defect Disorder. Journal of Physical Chemistry B, 2006, 110, 22447-22454.	1.2	64
11	Manipulation of Charge Transport by Metallic V <sub>13</sub> O <sub>16</sub> Decorated on Bismuth Vanadate Photoelectrochemical Catalyst. Advanced Materials, 2019, 31, e1807204.	11.1	57
12	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
13	The Formation of Defect Pairs for Highly Efficient Visible Light Catalysts. Advanced Materials, 2017, 29, 1605123.	11.1	43
14	Effect of Grain Boundaries on Semiconducting Properties of TiO <sub>2</sub> at Elevated Temperatures. Journal of Physical Chemistry C, 2007, 111, 9769-9778.	1.5	39
15	Effect of niobium on the structure of titanium dioxide thin films. Thin Solid Films, 2006, 510, 119-124.	0.8	36
16	Ab initio electronic structure calculation of oxygen vacancies in rutile titanium dioxide. Solid State Ionics, 2007, 178, 319-325.	1.3	34
17	Effect of Prolonged Oxidation on Semiconducting Properties of Titanium Dioxide. Journal of Physical Chemistry C, 2008, 112, 13248-13257.	1.5	30
18	Charge transport in polycrystalline titanium dioxide. Journal of Physics and Chemistry of Solids, 2003, 64, 1089-1095.	1.9	28

#	ARTICLE	IF	CITATIONS
19	Materials for photoelectrochemical energy conversion. <i>Advances in Applied Ceramics</i> , 2007, 106, 9-20.	0.6	28
20	Electrical Properties of Niobium-Doped Titanium Dioxide. 3. Thermoelectric Power. <i>Journal of Physical Chemistry C</i> , 2008, 112, 611-617.	1.5	27
21	Defect Chemistry and Electrical Properties of Titanium Dioxide. 1. Defect Diagrams. <i>Journal of Physical Chemistry C</i> , 2008, 112, 590-601.	1.5	27
22	Bulk Diffusion of Niobium in Single-Crystal Titanium Dioxide. <i>Journal of Physical Chemistry B</i> , 2007, 111, 8126-8130.	1.2	24
23	Defect Chemistry and Electrical Properties of Titanium Dioxide. 2. Effect of Aliovalent Ions. <i>Journal of Physical Chemistry C</i> , 2008, 112, 602-610.	1.5	24
24	Study of gamma irradiation effect on commercial TiO <sub>2</sub> photocatalyst. <i>Applied Radiation and Isotopes</i> , 2014, 89, 25-29.	0.7	23
25	TiO <sub>2</sub> -Based homojunction photo-electrode for solar-driven water splitting. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9386-9396.	3.8	21
26	Titanium dioxide for solar-hydrogen IV. Collective and local factors in photoreactivity. <i>International Journal of Hydrogen Energy</i> , 2007, 32, 2651-2659.	3.8	20
27	Length-scale-dependent nanoindentation creep behaviour of Ti/Al multilayers by magnetron sputtering. <i>Materials Characterization</i> , 2018, 139, 165-175.	1.9	20
28	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
29	Tantalum Segregation in Ta-Doped TiO <sub>2</sub> and the Related Impact on Charge Separation during Illumination. <i>Journal of Physical Chemistry C</i> , 2015, 119, 392-400.	1.5	19
30	Contamination of TiO <sub>2</sub> thin films spin coated on rutile and fused silica substrates. <i>Surface and Coatings Technology</i> , 2018, 354, 369-382.	2.2	18
31	Electrical Properties of Niobium-Doped Titanium Dioxide. 2. Equilibration Kinetics. <i>Journal of Physical Chemistry B</i> , 2006, 110, 22455-22461.	1.2	17
32	Charge Transport in Cr-Doped Titanium Dioxide. <i>Journal of Physical Chemistry C</i> , 2008, 112, 7255-7262.	1.5	17
33	Tantalum Enrichment in Tantalum-Doped Titanium Dioxide. <i>Journal of the American Ceramic Society</i> , 2014, 97, 3793-3799.	1.9	17
34	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
35	Chemical diffusion in metal oxides. Example of TiO <sub>2</sub> . <i>Ionics</i> , 2006, 12, 227-243.	1.2	14
36	Niobium segregation in TiO <sub>2</sub> . <i>Advances in Applied Ceramics</i> , 2007, 106, 82-88.	0.6	14

#	ARTICLE	IF	CITATIONS
37	Niobium Surface Segregation in Polycrystalline Niobium-Doped Titanium Dioxide. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3407-3413.	1.5	14
38	Metallic TiO <sub>2</sub> . <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2006, 203, R85-R87.	0.8	13
39	Contamination of TiO <sub>2</sub> thin films spin coated on borosilicate and rutile substrates. <i>Journal of Materials Science</i> , 2020, 55, 3774-3794.	1.7	13
40	Mo-doped, Cr-Doped, and Mo-Cr codoped TiO <sub>2</sub> 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
41	Defect disorder, transport and photoelectrochemical properties of TiO <sub>2</sub> . , 2005, , 84-119.		11
42	Titanium dioxide for solar-hydrogen III: Kinetic effects at elevated temperatures. <i>International Journal of Hydrogen Energy</i> , 2007, 32, 2644-2650.	3.8	11
43	Niobium diffusion in niobium-doped titanium dioxide. <i>Journal of Solid State Electrochemistry</i> , 2009, 13, 1115-1121.	1.2	11
44	Surface photovoltage studies of nonstoichiometric rutile titanium dioxide. <i>Applied Physics Letters</i> , 2010, 96, 072104.	1.5	9
45	Plastic behaviour of high-strength lightweight Al/Ti multilayered films. <i>Journal of Materials Science</i> , 2017, 52, 13956-13965.	1.7	9
46	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
47	Effect of cooling on electrical conductivity of TiO <sub>2</sub> . <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 1816-1827.	0.7	8
48	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
49	Comparative study on plasticity and fracture behaviour of Ti/Al multilayers. <i>Tribology International</i> , 2018, 126, 344-351.	3.0	8
50	Reactive sputtered Ti <sub>x</sub> Nb <sub>y</sub> N coatings. II. Effect of common deposition parameters. <i>Materials Chemistry and Physics</i> , 2019, 224, 320-327.	2.0	8
51	Determination of niobium diffusion in titania and zirconia using secondary ion mass spectrometry. <i>Advances in Applied Ceramics</i> , 2007, 106, 89-94.	0.6	7
52	Oriented epitaxial TiO <sub>2</sub> nanowires for water splitting. <i>Nanotechnology</i> , 2017, 28, 265602.	1.3	7
53	Reactive sputtered Ti <sub>x</sub> Nb <sub>y</sub> N thin films. I. Basic processing relationships. <i>Materials Chemistry and Physics</i> , 2019, 224, 308-313.	2.0	7
54	Chemical Synthesis and High-Pressure Reaction of Nb <sup>5+</sup> Monodoped Rutile TiO <sub>2</sub> Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12808-12815.	1.5	6

#	ARTICLE	IF	CITATIONS
55	Reactivity of TiO <sub>2</sub> with water and oxygen: surface science perspective. <i>Advances in Applied Ceramics</i> , 2007, 106, 49-56.	0.6	5
56	Solute Diffusion of Platinum in Rutile Titanium Dioxide. <i>Journal of the American Ceramic Society</i> , 2013, 96, 407-411.	1.9	5
57	Contamination of TiO <sub>2</sub> thin films spin coated on rutile and soda lime silica substrates. <i>Journal of Materials Science</i> , 2020, 55, 8061-8087.	1.7	5
58	Effect of niobium segregation on surface properties of titanium dioxide. , 2006, , .		4
59	Reactivity at the oxygen/titania interface and the related charge transfer. <i>Ionics</i> , 2006, 12, 247-251.	1.2	3
60	Materials for hydrogen energy. <i>Advances in Applied Ceramics</i> , 2007, 106, 1-1.	0.6	3
61	Dynamics of TiO <sub>2</sub> -based photoelectrochemical cell. <i>Ionics</i> , 2009, 15, 671-679.	1.2	2
62	Development of Novel Photoelectrode Materials with Improved Charge Separation Properties. <i>Advanced Materials Research</i> , 0, 975, 224-229.	0.3	2
63	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
64	Chromium doping of Ta <sub>3</sub> N <sub>5</sub> thin films via thermal nitridation of sputtered tantalum oxide films. <i>Materials Chemistry and Physics</i> , 2021, 258, 123838.	2.0	2
65	Development and basic study of TiO <sub>2</sub> coatings. <i>Advances in Applied Ceramics</i> , 2007, 106, 45-48.	0.6	1
66	Photoreactivity models for titanium dioxide with water. <i>Energy Materials</i> , 2008, 3, 158-168.	0.1	1
67	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
68	X-Ray Mapping of an Impact-Resistant Crustacean-Derived Biocomposite. <i>Microscopy and Microanalysis</i> , 2016, 22, 98-99.	0.2	1
69	Aluminum and Tantalum Doping of Sputtered TiO <sub>2</sub> Thin Films. <i>Microscopy and Microanalysis</i> , 2015, 21, 1799-1800.	0.2	0