Rodrigo AlcÃ¡ntara

List of Publications by Year
in descending order

86 papers	1,860 citations	279487 23 h-index	288905 40 g-index
89 all docs	89 docs citations	89 times ranked	3072 citing authors

#	Article	IF	Citations
1	MoS2-based nanofluids as heat transfer fluid in parabolic trough collector technology. Renewable Energy, 2022, 188, 721-730.	4.3	19
2	Comprehensive nanoscopic analysis of tungsten carbide/Oxygenated-diamond contacts for Schottky barrier diodes. Applied Surface Science, 2021, 537, 147874.	3.1	2
3	MoS2Tio2 Mixture: A Modification Strategies of Tio2 Nanoparticles to Improve Photocatalytic Activity Under Visible Light. Current Environmental Management, 2020, 6, 245-255.	0.7	2
4	Surface characterization of two Ce0.62Zr0.38O2 mixed oxides with different reducibility. Applied Surface Science, 2020, 503, 144255.	3.1	7
5	WSe₂ Nanosheets Synthesized by a Solvothermal Process as Advanced Nanofluids for Thermal Solar Energy. ACS Sustainable Chemistry and Engineering, 2020, 8, 1627-1636.	3.2	20
6	Insights into the stability and thermal properties of WSe2-based nanofluids for concentrating solar power prepared by liquid phase exfoliation. Journal of Molecular Liquids, 2020, 319, 114333.	2.3	10
7	The Role of the Interactions at the Tungsten Disulphide Surface in the Stability and Enhanced Thermal Properties of Nanofluids with Application in Solar Thermal Energy. Nanomaterials, 2020, 10, 970.	1.9	11
8	Surface States of (100) O-Terminated Diamond: Towards Other 1 Ã— 1:O Reconstruction Models. Nanomaterials, 2020, 10, 1193.	1.9	12
9	H-Terminated Diamond Surface Band Bending Characterization by Angle-Resolved XPS. Surfaces, 2020, 3, 61-71.	1.0	13
10	Novel WS₂-Based Nanofluids for Concentrating Solar Power: Performance Characterization and Molecular-Level Insights. ACS Applied Materials & Interfaces, 2020, 12, 5793-5804.	4.0	22
11	Synthesis of Wâ€doped TiO₂ by lowâ€temperature hydrolysis: Effects of annealing temperature and doping content on the surface microstructure and photocatalytic activity. Journal of the Chinese Chemical Society, 2019, 66, 99-109.	0.8	14
12	Intrinsic stability analysis of perovskite nanopowder with double and triple cation in a site, FAxMA(1-x)PbI3 and FAxCsyMA(1-x-y)PbI3. Materials Research Bulletin, 2019, 119, 110528.	2.7	5
13	2D MoSe2-based nanofluids prepared by liquid phase exfoliation for heat transfer applications in concentrating solar power. Solar Energy Materials and Solar Cells, 2019, 200, 109972.	3.0	28
14	Interface-inspired formulation and molecular-level perspectives on heat conduction and energy storage of nanofluids. Scientific Reports, 2019, 9, 7595.	1.6	20
15	Isotherm analysis for removal of organic pollutants Using Synthesized Mo/Cu/co-doped TiO2 Nanostrucrured. , 2019, , .		2
16	Dye-Sensitized Cu-Doped TiO2 Solar Cells with a Double Flat Band. Lecture Notes in Intelligent Transportation and Infrastructure, 2019, , 940-946.	0.3	1
17	Stability and Thermal Properties Study of Metal Chalcogenide-Based Nanofluids for Concentrating Solar Power. Energies, 2019, 12, 4632.	1.6	4
18	Revealing at the molecular level the role of the surfactant in the enhancement of the thermal properties of the gold nanofluid system used for concentrating solar power. Physical Chemistry Chemical Physics, 2018, 20, 2421-2430.	1.3	7

#	Article	IF	Citations
19	Unraveling the role of the base fluid arrangement in metal-nanofluids used to enhance heat transfer in concentrating solar power plants. Journal of Molecular Liquids, 2018, 252, 271-278.	2.3	6
20	Experimental and theoretical analysis of NiO nanofluids in presence of surfactants. Journal of Molecular Liquids, 2018, 252, 211-217.	2.3	17
21	MoS2/Cu/TiO2 nanoparticles: synthesis, characterization and effect on photocatalytic decomposition of methylene blue in water under visible light. Water Science and Technology, 2018, 2017, 184-193.	1.2	10
22	Dramatically enhanced thermal properties for TiO2-based nanofluids for being used as heat transfer fluids in concentrating solar power plants. Renewable Energy, 2018, 119, 809-819.	4.3	44
23	Oxygen termination of homoepitaxial diamond surface by ozone and chemical methods: An experimental and theoretical perspective. Applied Surface Science, 2018, 433, 408-418.	3.1	40
24	Investigation of enhanced thermal properties in NiO-based nanofluids for concentrating solar power applications: A molecular dynamics and experimental analysis. Applied Energy, 2018, 211, 677-688.	5.1	51
25	M(Al,Ni)-TiO₂-Based Photoanode for Photoelectrochemical Solar Cells. Zeitschrift Fur Physikalische Chemie, 2018, 232, 559-577.	1.4	6
26	A Solvothermal Synthesis of TiO2 Nanoparticles in a Non-Polar Medium to Prepare Highly Stable Nanofluids with Improved Thermal Properties. Nanomaterials, 2018, 8, 816.	1.9	14
27	The effect of Cu-doped TiO2 photoanode on photovoltaic performance of dye-sensitized solar cells. , 2018, , .		2
28	Visibleâ€Lightâ€Enhanced Photocatalytic Activity of Totally Inorganic Halideâ€Based Perovskite. ChemistrySelect, 2018, 3, 10226-10235.	0.7	21
29	MoS₂ nanosheets <i>vs.</i> nanowires: preparation and a theoretical study of highly stable and efficient nanofluids for concentrating solar power. Journal of Materials Chemistry A, 2018, 6, 14919-14929.	5.2	24
30	Towards the improvement of the global efficiency of concentrating solar power plants by using Pt-based nanofluids: The internal molecular structure effect. Applied Energy, 2018, 228, 2262-2274.	5.1	16
31	Experimental Characterization and Theoretical Modelling of Ag and Au-Nanofluids: A Comparative Study of Their Thermal Properties. Journal of Nanofluids, 2018, 7, 1059-1068.	1.4	4
32	The impact of Pd on the light harvesting in hybrid organic-inorganic perovskite for solar cells. Nano Energy, 2017, 34, 141-154.	8.2	28
33	Ag-based nanofluidic system to enhance heat transfer fluids for concentrating solar power: Nano-level insights. Applied Energy, 2017, 194, 19-29.	5.1	54
34	Preparation of Au nanoparticles in a non-polar medium: obtaining high-efficiency nanofluids for concentrating solar power. An experimental and theoretical perspective. Journal of Materials Chemistry A, 2017, 5, 12483-12497.	5.2	34
35	The Role of Surfactants in the Stability of NiO Nanofluids: An Experimental and DFT Study. ChemPhysChem, 2017, 18, 346-356.	1.0	8
36	Experimental and theoretical analysis of nanofluids based on high temperature-heat transfer fluid with enhanced thermal properties. EPJ Applied Physics, 2017, 78, 10901.	0.3	6

#	Article	IF	Citations
37	Hybrid Perovskite, CH₃NH₃PbI₃, for Solar Applications: An Experimental and Theoretical Analysis of Substitution in A and B Sites. Journal of Nanomaterials, 2017, 2017, 1-10.	1.5	8
38	On the enhancement of heat transfer fluid for concentrating solar power using Cu and Ni nanofluids: An experimental and molecular dynamics study. Nano Energy, 2016, 27, 213-224.	8.2	66
39	Micro-Raman Spectroscopy for the Determination of Local Temperature Increases in TiO2 Thin Films due to the Effect of Radiation. Applied Spectroscopy, 2016, 70, 1128-1136.	1.2	8
40	A Study of Overheating of Thermostatically Controlled TiO₂ Thin Films by Using Raman Spectroscopy. ChemPhysChem, 2015, 16, 3949-3958.	1.0	0
41	Tm-doped TiO₂ and Tm₂Ti₂O₇ pyrochlore nanoparticles: enhancing the photocatalytic activity of rutile with a pyrochlore phase. Beilstein Journal of Nanotechnology, 2015, 6, 605-616.	1.5	20
42	Study of thulium doping effect and enhancement of photocatalytic activity of rutile TiO2 nanoparticles. Materials Chemistry and Physics, 2015, 161, 175-184.	2.0	12
43	Highly Al-doped TiO2 nanoparticles produced by Ball Mill Method: structural and electronic characterization. Materials Research Bulletin, 2015, 70, 704-711.	2.7	28
44	New insights into organicâ€“inorganic hybrid perovskite CH₃NH₃PbI₃nanoparticles. An experimental and theoretical study of doping in Pb²⁺sites with Sn²⁺, Sr²⁺, Cd²⁺and Ca²⁺. Nanoscale, 2015, 7, 6216-6229.	2.8	216
45	Incorporation of Al-(hydr)oxide species onto the surface of TiO 2 nanoparticles: Improving the open-circuit voltage in dye-sensitized solar cells. Thin Solid Films, 2015, 578, 167-173.	0.8	5
46	TiO2and pyrochlore Tm2Ti2O7based semiconductor as a photoelectrode for dye-sensitized solar cells. Journal Physics D: Applied Physics, 2015, 48, 145102.	1.3	12
47	Surface thulium-doped TiO2 nanoparticles used as photoelectrodes in dye-sensitized solar cells: improving the open-circuit voltage. Applied Physics A: Materials Science and Processing, 2015, 121, 1261-1269.	1.1	6
48	Revealing the role of Pb²⁺ in the stability of organicâ€“inorganic hybrid perovskite CH₃NH₃Pb_{1âˆ'x}Cd_xI₃: an experimental and theoretical study. Physical Chemistry Chemical Physics, 2015, 17, 23886-23896.	1.3	38
49	Introducing â€œUCA-FUKUIâ€•software: reactivity-index calculations. Journal of Molecular Modeling, 2014, 20, 2492.	0.8	96
50	Convergent study of Ruâ€“ligand interactions through QTAIM, ELF, NBO molecular descriptors and TDDFT analysis of organometallic dyes. Molecular Physics, 2014, 112, 2063-2077.	0.8	9
51	Experimental and theoretical study of the electronic properties of Cu-doped anatase TiO2. Physical Chemistry Chemical Physics, 2014, 16, 3835.	1.3	111
52	Thermo-selective Tm_xTi_{1âˆ'x}O_{2âˆ'x/2}nanoparticles: from Tm-doped anatase TiO₂to a rutile/pyrochlore Tm₂Ti₂O₇mixture. An experimental and theoretical study with a photocatalytic application. Nanoscale, 2014, 6, 12740-12757.	2.8	32
53	Electronic and Structural Properties of Highly Aluminum Ion Doped TiO₂ Nanoparticles: A Combined Experimental and Theoretical Study. ChemPhysChem, 2014, 15, 2267-2280.	1.0	29
54	Cu(II)-Doped TiO₂ Nanoparticles as Photoelectrode in Dye-Sensitized Solar Cells: Improvement of Open-Circuit Voltage and a Light Scattering Effect. Science of Advanced Materials, 2014, 6, 473-482.	0.1	8

#	Article	IF	Citations
55	Synthesis and Characterization of Gel-Derived, Highly Al-Doped TiO₂(Al<I>_x</I>Ti_{1â€“<I>x</I>}O<SU Advanced Materials, 2014, 6, 2134-2145.	0.1	5
56	A route for the synthesis of Cu-doped TiO2 nanoparticles with a very low band gap. Chemical Physics Letters, 2013, 571, 49-53.	1.2	121
57	On-line thermal dependence study of the main solar cell electrical photoconversion parameters using low thermal emission lamps. Review of Scientific Instruments, 2012, 83, 063105.	0.6	5
58	Experimental analysis and computer simulation of a methodology for laser focusing in the solar cell characterization by laser beam induced current. Review of Scientific Instruments, 2012, 83, 043102.	0.6	4
59	Multi-technique analysis of high quality HPHT diamond crystal. Journal of Crystal Growth, 2012, 353, 115-119.	0.7	13
60	Improving openâ€circuit voltage in DSSCs using Cuâ€doped TiO₂ as a semiconductor. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 378-385.	0.8	54
61	Evaluation of decay photocurrent measurements in dye-sensitized solar cells: Application to laser beam-induced current technique. International Journal of Energy Research, 2012, 36, 193-203.	2.2	11
62	Direct Estimation of the Electron Diffusion Length in Dye-Sensitized Solar Cells. Journal of Physical Chemistry Letters, 2011, 2, 1045-1050.	2.1	34
63	ZnO-based dye solar cell with pure ionic-liquid electrolyte and organic sensitizer: the relevance of the dyeâ€“oxide interaction in an ionic-liquid medium. Physical Chemistry Chemical Physics, 2011, 13, 207-213.	1.3	38
64	Pore Characterization Methodology by Means of Capillary Sorption Tests. Transport in Porous Media, 2011, 86, 333-351.	1.2	3
65	Synthesis and Raman spectroscopy study of TiO₂ nanoparticles. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1970-1973.	0.8	13
66	Effect of gallia doping on the acidâ€“base and redox properties of ceria. Applied Catalysis A: General, 2010, 388, 202-210.	2.2	36
67	High resolution laser beam induced current images under trichromatic laser radiation: Approximation to the solar irradiation. Review of Scientific Instruments, 2010, 81, 035108.	0.6	8
68	Hydrogen passivation of boron acceptors in as-grown boron-doped CVD diamond epilayers. Diamond and Related Materials, 2010, 19, 904-907.	1.8	9
69	Improving photoresponse characterization of dye-sensitized solar cells: application to the laser beam-induced current technique. Measurement Science and Technology, 2010, 21, 075702.	1.4	1
70	Solvent-free ZnO dye-sensitised solar cells. Solar Energy Materials and Solar Cells, 2009, 93, 1846-1852.	3.0	49
71	A methodology for improving laser beam induced current images of dye sensitized solar cells. Review of Scientific Instruments, 2009, 80, 063102.	0.6	15
72	Photovoltaic performance of nanostructured zinc oxide sensitised with xanthene dyes. Journal of Photochemistry and Photobiology A: Chemistry, 2008, 200, 364-370.	2.0	75

#	Article	IF	Citations
73	High resolution laser beam induced current focusing for photoactive surface characterization. Applied Surface Science, 2006, 253, 2179-2188.	3.1	4
74	Application of correction algorithms for obtaining high-resolution LBIC maps of dye-sensitized solar cells. , 2006, 6197, 178.		0
75	A Photochemical Reactor for the Study of Kinetics and Adsorption Phenomena. Journal of Chemical Education, 2004, 81, 537.	1.1	7
76	A versatile computer-controlled high-resolution LBIC system. Progress in Photovoltaics: Research and Applications, 2004, 12, 283-295.	4.4	23
77	A precision method for laser focusing on laser beam induced current experiments. Review of Scientific Instruments, 2002, 73, 3895-3900.	0.6	16
78	Study on Shape Characterization of Crystalline Particles:â€‰ Analysis of the Standard Deviation of the Angular Projection Function. Journal of Physical Chemistry A, 2002, 106, 6334-6338.	1.1	2
79	Theoretical study of the morphologically originated noise associated with the transmittance of a precipitation system. Computers & Chemistry, 2002, 26, 131-140.	1.2	0
80	Experimental study of precipitating systems; computerised analysis of the optical transmittance and associated noise. Computers & Chemistry, 2001, 25, 447-457.	1.2	1
81	Study of precipitant systems by computerised simulation. Influence of optical elements on the noise associated with the transmittance. Computers & Chemistry, 2001, 25, 499-508.	1.2	0
82	Confinement of CdS nanocrystals in a sonogel matrix. Journal of Sol-Gel Science and Technology, 1997, 8, 275-283.	1.1	9
83	Evolution of Optical Transmittance in Precipitants Solutions. A Computer Simulation. Crystal Research and Technology, 1992, 27, 799-808.	0.6	4
84	The Detection of Salting-out. A Comparative Study. Crystal Research and Technology, 1991, 26, 35-42.	0.6	7
85	Raman intensities of cyclohexane in the gas phase. Journal of Raman Spectroscopy, 1989, 20, 291-296.	1.2	3
86	Enhanced thermophysical properties in spinel CuFe 2 O 4 â€based nanofluids for concentrated solar power. International Journal of Energy Research, 0, , .	2.2	1