

Rodrigo Alcantara

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87
papers

1,436
citations

20
h-index

35
g-index

89
ext. papers

1,692
ext. citations

4.5
avg, IF

4.32
L-index

#	Paper	IF	Citations
87	New insights into organic-inorganic hybrid perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$ nanoparticles. An experimental and theoretical study of doping in Pb^{2+} sites with Sn^{2+} , Sr^{2+} , Cd^{2+} and Ca^{2+} . <i>Nanoscale</i> , 2015 , 7, 6216-29	7.7	176
86	A route for the synthesis of Cu-doped TiO_2 nanoparticles with a very low band gap. <i>Chemical Physics Letters</i> , 2013 , 571, 49-53	2.5	95
85	Experimental and theoretical study of the electronic properties of Cu-doped anatase TiO_2 . <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 3835-45	3.6	91
84	Introducing "UCA-FUKUI" software: reactivity-index calculations. <i>Journal of Molecular Modeling</i> , 2014 , 20, 2492	2	74
83	Photovoltaic performance of nanostructured zinc oxide sensitised with xanthene dyes. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2008 , 200, 364-370	4.7	71
82	On the enhancement of heat transfer fluid for concentrating solar power using Cu and Ni nanofluids: An experimental and molecular dynamics study. <i>Nano Energy</i> , 2016 , 27, 213-224	17.1	50
81	Solvent-free ZnO dye-sensitised solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2009 , 93, 1846-1852	6.4	47
80	Improving open-circuit voltage in DSSCs using Cu-doped TiO_2 as a semiconductor. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2012 , 209, 378-385	1.6	46
79	Ag-based nanofluidic system to enhance heat transfer fluids for concentrating solar power: Nano-level insights. <i>Applied Energy</i> , 2017 , 194, 19-29	10.7	42
78	Dramatically enhanced thermal properties for TiO_2 -based nanofluids for being used as heat transfer fluids in concentrating solar power plants. <i>Renewable Energy</i> , 2018 , 119, 809-819	8.1	38
77	ZnO-based dye solar cell with pure ionic-liquid electrolyte and organic sensitizer: the relevance of the dye π -oxide interaction in an ionic-liquid medium. <i>Physical Chemistry Chemical Physics</i> , 2011 , 13, 207-13	3.6	37
76	Investigation of enhanced thermal properties in NiO-based nanofluids for concentrating solar power applications: A molecular dynamics and experimental analysis. <i>Applied Energy</i> , 2018 , 211, 677-688	10.7	36
75	Revealing the role of $\text{Pb}(2+)$ in the stability of organic-inorganic hybrid perovskite $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{Cd}_x\text{I}_3$: an experimental and theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 23886-96	3.6	33
74	Effect of gallia doping on the acid-base and redox properties of ceria. <i>Applied Catalysis A: General</i> , 2010 , 388, 202-210	5.1	33
73	Direct Estimation of the Electron Diffusion Length in Dye-Sensitized Solar Cells. <i>Journal of Physical Chemistry Letters</i> , 2011 , 2, 1045-1050	6.4	30
72	Preparation of Au nanoparticles in a non-polar medium: obtaining high-efficiency nanofluids for concentrating solar power. An experimental and theoretical perspective. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 12483-12497	13	25
71	Thermo-selective $\text{Tm}(x)\text{Ti}(1-x)\text{O}(2-x/2)$ nanoparticles: from Tm-doped anatase TiO_2 to a rutile/pyrochlore $\text{Tm}_2\text{Ti}_2\text{O}_7$ mixture. An experimental and theoretical study with a photocatalytic application. <i>Nanoscale</i> , 2014 , 6, 12740-57	7.7	24

70	Electronic and structural properties of highly aluminum ion doped TiO ₂ nanoparticles: a combined experimental and theoretical study. <i>ChemPhysChem</i> , 2014 , 15, 2267-80	3.2	24
69	Highly Al-doped TiO ₂ nanoparticles produced by Ball Mill Method: structural and electronic characterization. <i>Materials Research Bulletin</i> , 2015 , 70, 704-711	5.1	23
68	The impact of Pd on the light harvesting in hybrid organic-inorganic perovskite for solar cells. <i>Nano Energy</i> , 2017 , 34, 141-154	17.1	20
67	Oxygen termination of homoepitaxial diamond surface by ozone and chemical methods: An experimental and theoretical perspective. <i>Applied Surface Science</i> , 2018 , 433, 408-418	6.7	20
66	A versatile computer-controlled high-resolution LBIC system. <i>Progress in Photovoltaics: Research and Applications</i> , 2004 , 12, 283-295	6.8	19
65	2D MoSe ₂ -based nanofluids prepared by liquid phase exfoliation for heat transfer applications in concentrating solar power. <i>Solar Energy Materials and Solar Cells</i> , 2019 , 200, 109972	6.4	17
64	Tm-doped TiO ₂ and Tm ₂ Ti ₂ O ₇ pyrochlore nanoparticles: enhancing the photocatalytic activity of rutile with a pyrochlore phase. <i>Beilstein Journal of Nanotechnology</i> , 2015 , 6, 605-16	3	17
63	Interface-inspired formulation and molecular-level perspectives on heat conduction and energy storage of nanofluids. <i>Scientific Reports</i> , 2019 , 9, 7595	4.9	15
62	A precision method for laser focusing on laser beam induced current experiments. <i>Review of Scientific Instruments</i> , 2002 , 73, 3895-3900	1.7	14
61	Experimental and theoretical analysis of NiO nanofluids in presence of surfactants. <i>Journal of Molecular Liquids</i> , 2018 , 252, 211-217	6	13
60	A methodology for improving laser beam induced current images of dye sensitized solar cells. <i>Review of Scientific Instruments</i> , 2009 , 80, 063102	1.7	13
59	Visible-Light-Enhanced Photocatalytic Activity of Totally Inorganic Halide-Based Perovskite. <i>ChemistrySelect</i> , 2018 , 3, 10226-10235	1.8	13
58	MoS ₂ nanosheets vs. nanowires: preparation and a theoretical study of highly stable and efficient nanofluids for concentrating solar power. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 14919-14929	13	13
57	Synthesis of W-doped TiO ₂ by low-temperature hydrolysis: Effects of annealing temperature and doping content on the surface microstructure and photocatalytic activity. <i>Journal of the Chinese Chemical Society</i> , 2019 , 66, 99-109	1.5	11
56	Synthesis and Raman spectroscopy study of TiO ₂ nanoparticles. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2011 , 8, 1970-1973		11
55	TiO ₂ and pyrochlore Tm ₂ Ti ₂ O ₇ based semiconductor as a photoelectrode for dye-sensitized solar cells. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 145102	3	10
54	Novel WS ₂ -Based Nanofluids for Concentrating Solar Power: Performance Characterization and Molecular-Level Insights. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 5793-5804	9.5	10
53	Evaluation of decay photocurrent measurements in dye-sensitized solar cells: Application to laser beam-induced current technique. <i>International Journal of Energy Research</i> , 2012 , 36, 193-203	4.5	10

52	Study of thulium doping effect and enhancement of photocatalytic activity of rutile TiO ₂ nanoparticles. <i>Materials Chemistry and Physics</i> , 2015 , 161, 175-184	4.4	10
51	Multi-technique analysis of high quality HPHT diamond crystal. <i>Journal of Crystal Growth</i> , 2012 , 353, 115-119	11.9	10
50	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. <i>Nanomaterials</i> , 2020 , 10,	5.4	9
49	A Solvothermal Synthesis of TiO ₂ Nanoparticles in a Non-Polar Medium to Prepare Highly Stable Nanofluids with Improved Thermal Properties. <i>Nanomaterials</i> , 2018 , 8,	5.4	9
48	H-Terminated Diamond Surface Band Bending Characterization by Angle-Resolved XPS. <i>Surfaces</i> , 2020 , 3, 61-71	2.9	8
47	Towards the improvement of the global efficiency of concentrating solar power plants by using Pt-based nanofluids: The internal molecular structure effect. <i>Applied Energy</i> , 2018 , 228, 2262-2274	10.7	8
46	Convergent study of Ru ligand interactions through QTAIM, ELF, NBO molecular descriptors and TDDFT analysis of organometallic dyes. <i>Molecular Physics</i> , 2014 , 112, 2063-2077	1.7	8
45	Hydrogen passivation of boron acceptors in as-grown boron-doped CVD diamond epilayers. <i>Diamond and Related Materials</i> , 2010 , 19, 904-907	3.5	8
44	The Role of Surfactants in the Stability of NiO Nanofluids: An Experimental and DFT Study. <i>ChemPhysChem</i> , 2017 , 18, 346-356	3.2	7
43	Hybrid Perovskite, CH ₃ NH ₃ PbI ₃ , for Solar Applications: An Experimental and Theoretical Analysis of Substitution in A and B Sites. <i>Journal of Nanomaterials</i> , 2017 , 2017, 1-10	3.2	7
42	Confinement of CdS nanocrystals in a sonogel matrix. <i>Journal of Sol-Gel Science and Technology</i> , 1997 , 8, 275-283	2.3	7
41	The Detection of Salting-out. A Comparative Study. <i>Crystal Research and Technology</i> , 1991 , 26, 35-42	1.3	7
40	Cu(II)-Doped TiO ₂ Nanoparticles as Photoelectrode in Dye-Sensitized Solar Cells: Improvement of Open-Circuit Voltage and a Light Scattering Effect. <i>Science of Advanced Materials</i> , 2014 , 6, 473-482	2.3	7
39	High resolution laser beam induced current images under trichromatic laser radiation: approximation to the solar irradiation. <i>Review of Scientific Instruments</i> , 2010 , 81, 035108	1.7	6
38	A Photochemical Reactor for the Study of Kinetics and Adsorption Phenomena. <i>Journal of Chemical Education</i> , 2004 , 81, 537	2.4	6
37	WSe ₂ Nanosheets Synthesized by a Solvothermal Process as Advanced Nanofluids for Thermal Solar Energy. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 1627-1636	8.3	6
36	Insights into the stability and thermal properties of WSe ₂ -based nanofluids for concentrating solar power prepared by liquid phase exfoliation. <i>Journal of Molecular Liquids</i> , 2020 , 319, 114333	6	6
35	Surface thulium-doped TiO ₂ nanoparticles used as photoelectrodes in dye-sensitized solar cells: improving the open-circuit voltage. <i>Applied Physics A: Materials Science and Processing</i> , 2015 , 121, 1261-1269	2.6	5

34	Unraveling the role of the base fluid arrangement in metal-nanofluids used to enhance heat transfer in concentrating solar power plants. <i>Journal of Molecular Liquids</i> , 2018 , 252, 271-278	6	5
33	MoS/Cu/TiO nanoparticles: synthesis, characterization and effect on photocatalytic decomposition of methylene blue in water under visible light. <i>Water Science and Technology</i> , 2017 , 2017, 184-193	2.2	5
32	Micro-Raman Spectroscopy for the Determination of Local Temperature Increases in TiO ₂ Thin Films due to the Effect of Radiation. <i>Applied Spectroscopy</i> , 2016 , 70, 1128-36	3.1	5
31	On-line thermal dependence study of the main solar cell electrical photoconversion parameters using low thermal emission lamps. <i>Review of Scientific Instruments</i> , 2012 , 83, 063105	1.7	5
30	Synthesis and Characterization of Gel-Derived, Highly Al-Doped TiO ₂ (Al _x Ti _{1-x} O ₂) ₂ ; x = 0.083, 0.154, 0.2) Nanoparticles: Improving the Photocatalytic Activity. <i>Science of Advanced Materials</i> , 2014 , 6, 2134-2145	2.3	5
29	M(Al,Ni)-TiO ₂ -Based Photoanode for Photoelectrochemical Solar Cells. <i>Zeitschrift Fur Physikalische Chemie</i> , 2018 , 232, 559-577	3.1	5
28	Incorporation of Al-(hydr)oxide species onto the surface of TiO ₂ nanoparticles: Improving the open-circuit voltage in dye-sensitized solar cells. <i>Thin Solid Films</i> , 2015 , 578, 167-173	2.2	4
27	Surface States of (100) O-Terminated Diamond: Towards Other 1:1:O Reconstruction Models. <i>Nanomaterials</i> , 2020 , 10,	5.4	4
26	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. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 2421-2430	3.6	4
25	Intrinsic stability analysis of perovskite nanopowder with double and triple cation in a site, FAXMA(1-x)PbI ₃ and FAXCsyMA(1-x-y)PbI ₃ . <i>Materials Research Bulletin</i> , 2019 , 119, 110528	5.1	4
24	Evolution of Optical Transmittance in Precipitants Solutions. A Computer Simulation. <i>Crystal Research and Technology</i> , 1992 , 27, 799-808	1.3	4
23	Surface characterization of two Ce _{0.62} Zr _{0.38} O ₂ mixed oxides with different reducibility. <i>Applied Surface Science</i> , 2020 , 503, 144255	6.7	4
22	Experimental analysis and computer simulation of a methodology for laser focusing in the solar cell characterization by laser beam induced current. <i>Review of Scientific Instruments</i> , 2012 , 83, 043102	1.7	3
21	High resolution laser beam induced current focusing for photoactive surface characterization. <i>Applied Surface Science</i> , 2006 , 253, 2179-2188	6.7	3
20	Raman intensities of cyclohexane in the gas phase. <i>Journal of Raman Spectroscopy</i> , 1989 , 20, 291-296	2.3	3
19	Stability and Thermal Properties Study of Metal Chalcogenide-Based Nanofluids for Concentrating Solar Power. <i>Energies</i> , 2019 , 12, 4632	3.1	3
18	Experimental and theoretical analysis of nanofluids based on high temperature-heat transfer fluid with enhanced thermal properties. <i>EPJ Applied Physics</i> , 2017 , 78, 10901	1.1	2
17	Pore Characterization Methodology by Means of Capillary Sorption Tests. <i>Transport in Porous Media</i> , 2011 , 86, 333-351	3.1	2

16	Experimental Characterization and Theoretical Modelling of Ag and Au-Nanofluids: A Comparative Study of Their Thermal Properties. <i>Journal of Nanofluids</i> , 2018 , 7, 1059-1068	2.2	2
15	MoS ₂ -based nanofluids as heat transfer fluid in parabolic trough collector technology. <i>Renewable Energy</i> , 2022 , 188, 721-730	8.1	2
14	2019 ,		1
13	Improving photoresponse characterization of dye-sensitized solar cells: application to the laser beam-induced current technique. <i>Measurement Science and Technology</i> , 2010 , 21, 075702	2	1
12	Experimental study of precipitating systems; computerised analysis of the optical transmittance and associated noise. <i>Computers & Chemistry</i> , 2001 , 25, 447-57		1
11	Study on Shape Characterization of Crystalline Particles: Analysis of the Standard Deviation of the Angular Projection Function. <i>Journal of Physical Chemistry A</i> , 2002 , 106, 6334-6338	2.8	1
10	Dye-Sensitized Cu-Doped TiO ₂ Solar Cells with a Double Flat Band. <i>Lecture Notes in Intelligent Transportation and Infrastructure</i> , 2019 , 940-946	0.3	1
9	MoS ₂ TiO ₂ Mixture: A Modification Strategies of TiO ₂ Nanoparticles to Improve Photocatalytic Activity Under Visible Light. <i>Current Environmental Management</i> , 2020 , 6, 245-255	0.4	1
8	Comprehensive nanoscopic analysis of tungsten carbide/Oxygenated-diamond contacts for Schottky barrier diodes. <i>Applied Surface Science</i> , 2021 , 537, 147874	6.7	0
7	A Study of Overheating of Thermostatically Controlled TiO ₂ Thin Films by Using Raman Spectroscopy. <i>ChemPhysChem</i> , 2015 , 16, 3949-58	3.2	
6	Application of correction algorithms for obtaining high-resolution LBIC maps of dye-sensitized solar cells 2006 , 6197, 178		
5	Theoretical study of the morphologically originated noise associated with the transmittance of a precipitation system. <i>Computers & Chemistry</i> , 2002 , 26, 131-40		
4	Study of precipitant systems by computerised simulation. Influence of optical elements on the noise associated with the transmittance. <i>Computers & Chemistry</i> , 2001 , 25, 499-508		
3	Influence of Temperature and Doping Content on the Photocatalytic Activity in Visible Light of W-Doped TiO ₂ . <i>Advances in Science, Technology and Innovation</i> , 2018 , 153-154	0.3	
2	OrganicInorganic Hybrid Perovskite, CH ₃ NH ₃ PbI ₃ : Modifications in Pb Sites from Experimental and Theoretical Perspectives 2018 , 357-400		
1	Insights into the Photovoltaic and Photocatalytic Activity of Cu-, Al-, and Tm-Doped TiO ₂ 2018 , 165-194		