Juan Carlos Castro-Palacio

List of Publications by Year
in descending order

49 papers	617 citations	623734 14 h-index	642732 23 g-index
52 all docs	52 docs citations	52 times ranked	444 citing authors

#	Article	IF	Citations
1	Using a mobile phone acceleration sensor in physics experiments on free and damped harmonic oscillations. American Journal of Physics, 2013, 81, 472-475.	0.7	74
2	Stability of terrestrial planets in the habitable zone of GlÂ777ÂA, HD 72659, Gl 614, 47 Uma and HD 4208. Astronomy and Astrophysics, 2004, 426, 353-365.	5.1	65
3	A quantitative analysis of coupled oscillations using mobile accelerometer sensors. European Journal of Physics, 2013, 34, 737-744.	0.6	47
4	Computational study of collisions between O(3P) and NO(2Î) at temperatures relevant to the hypersonic flight regime. Journal of Chemical Physics, 2014, 141, 164319.	3.0	34
5	The acoustic Doppler effect applied to the study of linear motions. European Journal of Physics, 2014, 35, 025006.	0.6	33
6	Normal and hyperspherical mode analysis of NO-doped Kr crystals upon Rydberg excitation of the impurity. Journal of Chemical Physics, 2007, 126, 174701.	3.0	30
7	Ab initio intermolecular potential energy surface for the CO2â€”N2 system and related thermophysical properties. Journal of Chemical Physics, 2018, 148, 214306.	3.0	24
8	Communication: Equilibrium rate coefficients from atomistic simulations: The O(3P) + NO(2Î) â†' O2(X3Î£gâ^) + N(4S) reaction at temperatures relevant to the hypersonic flight regime. Journal of Chemical Physics, 2015, 142, 091104.	3.0	22
9	The study of two-dimensional oscillations using a smartphone acceleration sensor: example of Lissajous curves. Physics Education, 2015, 50, 580-586.	0.5	20
10	Diffraction by electronic components of everyday use. American Journal of Physics, 2014, 82, 257-261.	0.7	17
11	Collision-induced rotational excitation in N2+(2Î£g+,v=)â€“Ar: Comparison of computations and experiment. Journal of Chemical Physics, 2016, 144, 224307.	3.0	16
12	Hollow Gold Nanoparticles Produced by Femtosecond Laser Irradiation. Journal of Physical Chemistry Letters, 2020, 11, 5108-5114.	4.6	16
13	Study of the structural photoinduced dynamics of a solid Kr matrix with an NO impurity. European Physical Journal D, 2003, 25, 149-155.	1.3	15
14	Formation of Hollow Gold Nanocrystals by Nanosecond Laser Irradiation. Journal of Physical Chemistry Letters, 2020, 11, 670-677.	4.6	15
15	Molecular dynamics simulations and hyperspherical mode analysis of NO in Kr crystals with the use of ab initio potential energy surfaces for the Krâ€NO complex. International Journal of Quantum Chemistry, 2008, 108, 1821-1830.	2.0	13
16	Ab initioground and excited state potential energy surfaces for NOâ€“Kr complex and dynamics of Kr solids with NO impurity. Journal of Chemical Physics, 2007, 126, 134315.	3.0	11
17	Smart physics with smartphone sensors. , 2014, , .		10
18	Direct Visualization of Mechanical Beats by Means of an Oscillating Smartphone. Physics Teacher, 2017, 55, 424-425.	0.3	10

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19	Dynamics of structural relaxation upon Rydberg excitation of an NO impurity in rare gas solid matrices. Physica Status Solidi (B): Basic Research, 2005, 242, 1747-1753.	1.5	9
20	A Probabilistic Classification Procedure Based on Response Time Analysis Towards a Quick Pre-Diagnosis of Studentâ€™s Attention Deficit. Mathematics, 2019, 7, 473.	2.2	9
21	Fluctuations in measured radioactive decay rates inside a modified Faraday cage: Correlations with space weather. Scientific Reports, 2020, 10, 8525.	3.3	9
22	NO in Kr and Xe solids: Molecular dynamics and normal mode analysis. Computational and Theoretical Chemistry, 2005, 730, 255-261.	1.5	8
23	An ab initio study of the Arâ€“NO(Aâ€‰Î£2+) intermolecular potential. Journal of Chemical Physics, 2009, 131, 044506.	3.0	8
24	Direct measurement of the speed of sound using a microphone and a speaker. Physics Education, 2014, 49, 310-313.	0.5	8
25	Rotational relaxation of CF+(X1Î£) in collision with He(1S). Monthly Notices of the Royal Astronomical Society, 2018, 473, 1438-1443.	4.4	7
26	Characterization of linear light sources with the smartphoneâ€™s ambient light sensor. Physics Teacher, 2018, 56, 562-563.	0.3	7
27	Hyperspherical and related views of the dynamics of nanoclusters. Physica Scripta, 2009, 80, 048103.	2.5	6
28	Improving the efficiency of Monte Carlo simulations of systems that undergo temperature-driven phase transitions. Physical Review E, 2013, 88, 013311.	2.1	6
29	Frequency analyser: A new Android application for high precision frequency measurement. Computer Applications in Engineering Education, 2015, 23, 471-476.	3.4	6
30	Correlations between Background Radiation Inside a Multilayer Interleaving Structure, Geomagnetic Activity, and Cosmic Radiation: A Fourth-Order Cumulant-Based Correlation Analysis. Mathematics, 2020, 8, 344.	2.2	6
31	Extended canonical Monte Carlo methods: Improving accuracy of microcanonical calculations using a reweighting technique. Physical Review E, 2015, 91, 033308.	2.1	5
32	Dilute gas viscosity of n-alkanes represented by rigid Lennard-Jones chains. Molecular Physics, 2016, 114, 3171-3182.	1.7	5
33	Machinery Failure Approach and Spectral Analysis to Study the Reaction Time Dynamics over Consecutive Visual Stimuli: An Entropy-Based Model. Mathematics, 2020, 8, 1979.	2.2	5
34	Percentile Study of Ï‡ Distribution. Application to Response Time Data. Mathematics, 2020, 8, 514.	2.2	5
35	Human Reaction Times: Linking Individual and Collective Behaviour Through Physics Modeling. Symmetry, 2021, 13, 451.	2.2	5
36	Monte Carlo Simulation of a Modified Chi Distribution Considering Asymmetry in the Generating Functions: Application to the Study of Health-Related Variables. Symmetry, 2021, 13, 924.	2.2	5

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37	Study on band gap structure of Fibonacci quantum superlattices by using the transfer matrix method. Modern Physics Letters B, 2014, 28, 1450053.	1.9	4
38	The cosmological constant of emergent spacetime in the Newtonian approximation. International Journal of Modern Physics D, 2020, 29, 2050093.	2.1	4
39	Sliding Modes Control for Heat Transfer in Geodesic Domes. Mathematics, 2020, 8, 902.	2.2	4
40	Monte Carlo Simulation of a Modified Chi Distribution with Unequal Variances in the Generating Gaussians. A Discrete Methodology to Study Collective Response Times. Mathematics, 2021, 9, 77.	2.2	4
41	Argon Solid Response upon Rydberg Photoexcitation of the NO Chromosphore: Case of Using ab Initio Potential Energy Surfaces and Comparison to Similar Studied Systems. Journal of Physical Chemistry A, 2010, 114, 9673-9680.	2.5	3
42	SELF-SIMILAR BEHAVIOR IN SEMICONDUCTOR SUPERLATTICES. Fractals, 2012, 20, 89-95.	3.7	3
43	An ab initio study of Xeâ€“NO(X2Π) and Xeâ€“NO(A2Î£+) potential energy surfaces. Procedia Computer Science, 2011, 4, 1135-1144.	2.0	1
44	Molecular dynamics study of one dimensional nanoscale Si/SiO2 interfaces. European Physical Journal D, 2013, 67, 1.	1.3	1
45	Passive Strategies to Improve the Comfort Conditions in a Geodesic Dome. Mathematics, 2021, 9, 663.	2.2	1
46	El smartphone como barÃ³metro en experimentos de FÃsica. Modelling in Science Education and Learning, 2018, 11, 15.	0.2	1
47	Promoting mathematical skills using the instructive program Kriging. , 2011, , .		0
48	STUDY OF TWO-DIMENSIONAL COUPLED OSCILLATIONS USING A SMARTPHONE ACCELERATION SENSOR FOR PHYSICS TEACHING. , 2016, , .		0
49	Desarrollo de habilidades de modelaciÃ³n desde las ecuaciones mÃ¡s simples de la HidrodinÃ¡mica. Modelling in Science Education and Learning, 2017, 10, 211.	0.2	0