Miguel Cruz-Irisson, M Cruz, Miguel Cr

List of Publications by Year
in descending order

83 papers	940 citations	566801 15 h-index	552369 26 g-index
83 all docs	83 docs citations	83 times ranked	623 citing authors

#	Article	IF	Citations
1	Tin carbide monolayers decorated with alkali metal atoms for hydrogen storage. International Journal of Hydrogen Energy, 2022, 47, 41329-41335.	3.8	13
2	NH3 capture and detection by metal-decorated germanene: a DFT study. Journal of Materials Science, 2022, 57, 8516-8529.	1.7	35
3	Transition metal-decorated germanene for NO, N2 and O2 sensing: A DFT study. Surfaces and Interfaces, 2022, 30, 101886.	1.5	12
4	Tunable electronic properties of silicon nanowires as sodiumâ€battery anodes. International Journal of Energy Research, 2022, 46, 17151-17162.	2.2	1
5	Hydrogen storage capacities of alkali and alkaline-earth metal atoms on SiC monolayer: A first-principles study. International Journal of Hydrogen Energy, 2021, 46, 20266-20279.	3.8	39
6	Alkali and transition metal atom-functionalized germanene for hydrogen storage: A DFT investigation. International Journal of Hydrogen Energy, 2021, 46, 20245-20256.	3.8	57
7	Light metal functionalized two-dimensional siligene for high capacity hydrogen storage: DFT study. International Journal of Hydrogen Energy, 2021, 46, 29348-29360.	3.8	38
8	Fluorinated porous silicon as sensor material for environmentally toxic gases: a first-principles study. Materials Advances, 2021, 2, 1072-1082.	2.6	2
9	Ab initio study of hydrogen storage on metal-decorated GeC monolayers. International Journal of Hydrogen Energy, 2021, 46, 29261-29271.	3.8	35
10	Silicon nanowires as acetone-adsorptive media for diabetes diagnosis. Applied Surface Science, 2021, 547, 149175.	3.1	5
11	Tunable thermal conductivity of ternary alloy semiconductors from first-principles. Journal Physics D: Applied Physics, 2021, 54, 335302.	1.3	1
12	Hydrogen storage on metal decorated pristine siligene and metal decorated boron-doped siligene. Materials Letters, 2021, 293, 129743.	1.3	11
13	Molecular oxygen dissociation on tin carbide monolayers with gold adatoms. Materials Letters, 2021, 293, 129675.	1.3	3
14	Tin carbide monolayers as potential gas sensors. Materials Letters, 2021, 294, 129751.	1.3	6
15	Adsorption of urea on metal-functionalized Si nanowires for a potential uremia diagnosis: A DFT study. Materials Letters, 2021, 298, 130016.	1.3	4
16	Gas adsorption enhancement on transition-metal-decorated tin carbide monolayers. Materials Letters, 2021, 298, 130030.	1.3	9
17	CO and CO2 adsorption performance of transition metal-functionalized germanene. Materials Letters, 2021, 300, 130201.	1.3	12
18	Hydrogen storage on bidimensional GeC with transition metal adatoms. Materials Letters, 2021, 300, 130239.	1.3	4

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19	Thermoelectric transport in poly(G)-poly(C) double chains. Journal of Physics and Chemistry of Solids, 2020, 136, 109136.	1.9	3
20	Theoretical modelling of porous silicon decorated with metal atoms for hydrogen storage. International Journal of Hydrogen Energy, 2020, 45, 26321-26333.	3.8	14
21	Effects of lithium on the electronic properties of porous Ge as anode material for batteries. Journal of Computational Chemistry, 2020, 41, 2653-2662.	1.5	2
22	Mechanical and Electronic Properties of Tin Carbide Nanowires. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900590.	0.8	4
23	Confinement effect on the low temperature specific heat for ultrathin silicon nanowires: A first principles study. Journal of Physics Condensed Matter, 2019, 31, 425303.	0.7	0
24	Interstitial sodium and lithium doping effects on the electronic and mechanical properties of silicon nanowires: a DFT study. Journal of Molecular Modeling, 2019, 25, 338.	0.8	5
25	Lithiation effects on the structural and electronic properties of Si nanowires as a potential anode material. Energy Storage Materials, 2019, 20, 438-445.	9.5	13
26	Quasi-one-dimensional silicon nanostructures for gas molecule adsorption: a DFT investigation. Applied Surface Science, 2019, 475, 278-284.	3.1	14
27	Carbon monoxide sensing properties of B-, Al- and Ga-doped Si nanowires. Nanotechnology, 2018, 29, 204001.	1.3	13
28	Lithium effects on the mechanical and electronic properties of germanium nanowires. Nanotechnology, 2018, 29, 154004.	1.3	9
29	First principles band gap engineering of [1â€¯1â€¯0] oriented 3C-SiC nanowires. Computational Materials Science, 2018, 142, 268-276.	1.4	12
30	Effects of surface and confinement on the optical vibrational modes and dielectric function of 3C porous silicon carbide: An ab-initio study. Physica B: Condensed Matter, 2018, 550, 420-427.	1.3	7
31	Theoretical study of the mechanical and electronic properties of [111]-Si nanowires with interstitial lithium. Journal of Materials Science: Materials in Electronics, 2018, 29, 15795-15800.	1.1	6
32	Quantum confinement effects on the harmfulâ€gasâ€sensing properties of silicon nanowires. International Journal of Quantum Chemistry, 2018, 118, e25713.	1.0	9
33	Band-gap engineering of halogenated silicon nanowires through molecular doping. Journal of Molecular Modeling, 2017, 23, 314.	0.8	7
34	Bidimensional perovskite systems for spintronic applications. Journal of Molecular Modeling, 2017, 23, 322.	0.8	3
35	Silicon nanowires as potential gas sensors: A density functional study. Sensors and Actuators B: Chemical, 2017, 242, 1246-1250.	4.0	39
36	Electronic and magnetic properties of an iron perovskite slab. Ferroelectrics, 2016, 499, 130-134.	0.3	0

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37	Optical vibrational modes of Ge nanowires: A computational approach. Microelectronic Engineering, 2016, 159, 215-220.	1.1	7
38	Effects of surface passivation by lithium on the mechanical and electronic properties of silicon nanowires. Solid State Communications, 2016, 247, 6-11.	0.9	7
39	Perovskite-Type Thin Slabs: A First-Principles Study of Their Magnetic and Electronic Properties. IEEE Magnetics Letters, 2016, 7, 1-3.	0.6	3
40	First-principles study of the structural, elastic, vibrational, thermodynamic and electronic properties of the Mo2B intermetallic under pressure. Journal of Molecular Structure, 2016, 1125, 350-357.	1.8	7
41	Steganography on quantum pixel images using Shannon entropy. International Journal of Quantum Information, 2016, 14, 1650021.	0.6	7
42	Effect of the transition metal ratio on bulk and thin slab double perovskite Sr2FeMoO6. Microelectronic Engineering, 2016, 162, 110-113.	1.1	0
43	Controlling stability and electronic properties of small-diameter SiC nanowires by fluorination. International Journal of Nanotechnology, 2015, 12, 218.	0.1	5
44	Electronic structure and optical vibrational modes of 3C-SiC nanowires. International Journal of Nanotechnology, 2015, 12, 275.	0.1	5
45	Equivalence of a Bit Pixel Image to a Quantum Pixel Image. Communications in Theoretical Physics, 2015, 64, 501-506.	1.1	8
46	Theoretical approach to the phonon modes and specific heat of germanium nanowires. Physica B: Condensed Matter, 2014, 453, 14-18.	1.3	2
47	Interactions among magnetic moments in the double perovskites Sr2Fe1+xMo1âˆ'xO6. Physica B: Condensed Matter, 2014, 455, 103-105.	1.3	2
48	Digital noise produced by a non discretized tent chaotic map. Microelectronic Engineering, 2013, 112, 264-268.	1.1	6
49	Ab-initio study of anisotropic and chemical surface modifications of Î²-SiC nanowires. Journal of Molecular Modeling, 2013, 19, 2043-2048.	0.8	16
50	Anisotropic effects on the radial breathing mode of silicon nanowires: An ab initio study. Physica E: Low-Dimensional Systems and Nanostructures, 2013, 51, 10-14.	1.3	10
51	Computational Modeling of the Size Effects on the Optical Vibrational Modes of H-Terminated Ge Nanostructures. Molecules, 2013, 18, 4776-4785.	1.7	6
52	Interconnection effects on the electronic and optical properties of Ge nanostructures: A semi-empirical approach. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1230-1235.	1.3	11
53	Ab-initio modeling of oxygen on the surface passivation of 3CSiC nanostructures. Applied Surface Science, 2012, 258, 8360-8365.	3.1	14
54	A Density Functional Theory study of the chemical surface modification of Î²-SiC nanopores. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 1482-1486.	1.7	6

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55	FeMo double perovskite: From small clusters to bulk material. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2012, 177, 1514-1517.	1.7	5
56	Computational simulation of the effects of oxygen on the electronic states of hydrogenated 3C-porous SiC. Nanoscale Research Letters, 2012, 7, 471.	3.1	17
57	Energy spectrum for a modified Rosen-Morse potential solved by proper quantization rule and its thermodynamic properties. Journal of Mathematical Chemistry, 2012, 50, 881-892.	0.7	83
58	Chaotic block cryptosystem using high precision approaches to tent map. Microelectronic Engineering, 2012, 90, 168-172.	1.1	8
59	Phonon optical modes and electronic properties in diamond nanowires. Microelectronic Engineering, 2012, 90, 92-95.	1.1	10
60	Phonon band structure of porous Ge from ab initio supercell calculation. Microelectronic Engineering, 2012, 90, 141-144.	1.1	3
61	A current mode CMOS noise generator using multiple Bernoulli maps. Microelectronic Engineering, 2012, 90, 163-167.	1.1	2
62	Raman scattering by confined optical phonons in Si and Ge nanostructures. Nanoscale, 2011, 3, 1246.	2.8	24
63	Proper quantization rule as a good candidate to semiclassical quantization rules. Annalen Der Physik, 2011, 523, 771-782.	0.9	22
64	Chemical surface passivation of 3Câ€SiC nanocrystals: A firstâ€principle study. International Journal of Quantum Chemistry, 2010, 110, 2455-2461.	1.0	15
65	Molecular Doping and Subsurface Dopant Reactivation in Si Nanowires. Nano Letters, 2010, 10, 3590-3595.	4.5	39
66	3D color video conversion from 2D video sequence using stereo matching technique. , 2009, , .		0
67	Electronic and Vibrational Properties of Porous Silicon. Journal of Nano Research, 2009, 5, 153-160.	0.8	1
68	Optical matrix elements in tight-binding approach of hydrogenated Si nanowires. Microelectronics Journal, 2009, 40, 456-458.	1.1	7
69	Chaotic noise MOS generator based on logistic map. Microelectronics Journal, 2009, 40, 638-640.	1.1	13
70	Quantum confinement effects on electronic properties of hydrogenated 3Câ€“SiC nanowires. Microelectronics Journal, 2009, 40, 796-798.	1.1	12
71	Effects of Morphology on the Electronic Properties of Hydrogenated Silicon Carbide Nanowires. Journal of Nano Research, 2009, 5, 161-167.	0.8	12
72	Theory of Raman Scattering by Phonons in Germanium Nanostructures. Nanoscale Research Letters, 2008, 3, .	3.1	21

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73	Vibrational states in low-dimensional structures: An application to silicon quantum wires. Microelectronics Journal, 2008, 39, 472-474.	1.1	2
74	Electronic and optical properties of ordered porous germanium. Microelectronics Journal, 2008, 39, 523-525.	1.1	8
75	Hydrogenated Ge nanocrystals: band gap evolution with increasing size. Brazilian Journal of Physics, 2006, 36, 375-378.	0.7	10
76	Boundary conditions in theory of photothermal processes. Brazilian Journal of Physics, 2006, 36, 1097-1100.	0.7	1
77	Modeling Raman scattering in porous silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 3500-3504.	0.8	0
78	Tight-binding description of disordered nanostructures: an application to porous silicon. Applied Surface Science, 1999, 142, 564-568.	3.1	8
79	Efficient non-vertical interband transitions in porous silicon. Physica A: Statistical Mechanics and Its Applications, 1997, 241, 382-385.	1.2	1
80	Quasi-confinement, localization and optical properties in porous silicon. Thin Solid Films, 1997, 297, 261-264.	0.8	4
81	Morphological effects on the electronic band structure of porous silicon. Physical Review B, 1996, 53, 3827-3832.	1.1	40
82	Raman response of porous silicon. Physica A: Statistical Mechanics and Its Applications, 1994, 207, 168-173.	1.2	1
83	Sodium effects on the electronic and structural properties of porous silicon for energy storage. International Journal of Energy Research, 0, , .	2.2	2