

Miguel Cruz-Irisson, M Cruz, Miguel Cruz

List of Publications by Year in descending order

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83
papers

940
citations

566801

15
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552369

26
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83
all docs

83
docs citations

83
times ranked

623
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy spectrum for a modified Rosen-Morse potential solved by proper quantization rule and its thermodynamic properties. <i>Journal of Mathematical Chemistry</i> , 2012, 50, 881-892.	0.7	83
2	Alkali and transition metal atom-functionalized germanene for hydrogen storage: A DFT investigation. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 20245-20256.	3.8	57
3	Morphological effects on the electronic band structure of porous silicon. <i>Physical Review B</i> , 1996, 53, 3827-3832.	1.1	40
4	Molecular Doping and Subsurface Dopant Reactivation in Si Nanowires. <i>Nano Letters</i> , 2010, 10, 3590-3595.	4.5	39
5	Silicon nanowires as potential gas sensors: A density functional study. <i>Sensors and Actuators B: Chemical</i> , 2017, 242, 1246-1250.	4.0	39
6	Hydrogen storage capacities of alkali and alkaline-earth metal atoms on SiC monolayer: A first-principles study. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 20266-20279.	3.8	39
7	Light metal functionalized two-dimensional siligene for high capacity hydrogen storage: DFT study. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 29348-29360.	3.8	38
8	Ab initio study of hydrogen storage on metal-decorated GeC monolayers. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 29261-29271.	3.8	35
9	NH ₃ capture and detection by metal-decorated germanene: a DFT study. <i>Journal of Materials Science</i> , 2022, 57, 8516-8529.	1.7	35
10	Raman scattering by confined optical phonons in Si and Ge nanostructures. <i>Nanoscale</i> , 2011, 3, 1246.	2.8	24
11	Proper quantization rule as a good candidate to semiclassical quantization rules. <i>Annalen Der Physik</i> , 2011, 523, 771-782.	0.9	22
12	Theory of Raman Scattering by Phonons in Germanium Nanostructures. <i>Nanoscale Research Letters</i> , 2008, 3, .	3.1	21
13	Computational simulation of the effects of oxygen on the electronic states of hydrogenated 3C-porous SiC. <i>Nanoscale Research Letters</i> , 2012, 7, 471.	3.1	17
14	Ab-initio study of anisotropic and chemical surface modifications of β -SiC nanowires. <i>Journal of Molecular Modeling</i> , 2013, 19, 2043-2048.	0.8	16
15	Chemical surface passivation of 3C-SiC nanocrystals: A first-principle study. <i>International Journal of Quantum Chemistry</i> , 2010, 110, 2455-2461.	1.0	15
16	Ab-initio modeling of oxygen on the surface passivation of 3CSiC nanostructures. <i>Applied Surface Science</i> , 2012, 258, 8360-8365.	3.1	14
17	Quasi-one-dimensional silicon nanostructures for gas molecule adsorption: a DFT investigation. <i>Applied Surface Science</i> , 2019, 475, 278-284.	3.1	14
18	Theoretical modelling of porous silicon decorated with metal atoms for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 26321-26333.	3.8	14

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19	Chaotic noise MOS generator based on logistic map. <i>Microelectronics Journal</i> , 2009, 40, 638-640.	1.1	13
20	Carbon monoxide sensing properties of B-, Al- and Ga-doped Si nanowires. <i>Nanotechnology</i> , 2018, 29, 204001.	1.3	13
21	Lithiation effects on the structural and electronic properties of Si nanowires as a potential anode material. <i>Energy Storage Materials</i> , 2019, 20, 438-445.	9.5	13
22	Tin carbide monolayers decorated with alkali metal atoms for hydrogen storage. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 41329-41335.	3.8	13
23	Quantum confinement effects on electronic properties of hydrogenated 3C-SiC nanowires. <i>Microelectronics Journal</i> , 2009, 40, 796-798.	1.1	12
24	Effects of Morphology on the Electronic Properties of Hydrogenated Silicon Carbide Nanowires. <i>Journal of Nano Research</i> , 2009, 5, 161-167.	0.8	12
25	First principles band gap engineering of [110] oriented 3C-SiC nanowires. <i>Computational Materials Science</i> , 2018, 142, 268-276.	1.4	12
26	CO and CO ₂ adsorption performance of transition metal-functionalized germanene. <i>Materials Letters</i> , 2021, 300, 130201.	1.3	12
27	Transition metal-decorated germanene for NO, N ₂ and O ₂ sensing: A DFT study. <i>Surfaces and Interfaces</i> , 2022, 30, 101886.	1.5	12
28	Interconnection effects on the electronic and optical properties of Ge nanostructures: A semi-empirical approach. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 44, 1230-1235.	1.3	11
29	Hydrogen storage on metal decorated pristine siligene and metal decorated boron-doped siligene. <i>Materials Letters</i> , 2021, 293, 129743.	1.3	11
30	Hydrogenated Ge nanocrystals: band gap evolution with increasing size. <i>Brazilian Journal of Physics</i> , 2006, 36, 375-378.	0.7	10
31	Phonon optical modes and electronic properties in diamond nanowires. <i>Microelectronic Engineering</i> , 2012, 90, 92-95.	1.1	10
32	Anisotropic effects on the radial breathing mode of silicon nanowires: An ab initio study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2013, 51, 10-14.	1.3	10
33	Lithium effects on the mechanical and electronic properties of germanium nanowires. <i>Nanotechnology</i> , 2018, 29, 154004.	1.3	9
34	Quantum confinement effects on the harmful gas sensing properties of silicon nanowires. <i>International Journal of Quantum Chemistry</i> , 2018, 118, e25713.	1.0	9
35	Gas adsorption enhancement on transition-metal-decorated tin carbide monolayers. <i>Materials Letters</i> , 2021, 298, 130030.	1.3	9
36	Tight-binding description of disordered nanostructures: an application to porous silicon. <i>Applied Surface Science</i> , 1999, 142, 564-568.	3.1	8

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37	Electronic and optical properties of ordered porous germanium. <i>Microelectronics Journal</i> , 2008, 39, 523-525.	1.1	8
38	Chaotic block cryptosystem using high precision approaches to tent map. <i>Microelectronic Engineering</i> , 2012, 90, 168-172.	1.1	8
39	Equivalence of a Bit Pixel Image to a Quantum Pixel Image. <i>Communications in Theoretical Physics</i> , 2015, 64, 501-506.	1.1	8
40	Optical matrix elements in tight-binding approach of hydrogenated Si nanowires. <i>Microelectronics Journal</i> , 2009, 40, 456-458.	1.1	7
41	Optical vibrational modes of Ge nanowires: A computational approach. <i>Microelectronic Engineering</i> , 2016, 159, 215-220.	1.1	7
42	Effects of surface passivation by lithium on the mechanical and electronic properties of silicon nanowires. <i>Solid State Communications</i> , 2016, 247, 6-11.	0.9	7
43	First-principles study of the structural, elastic, vibrational, thermodynamic and electronic properties of the Mo ₂ B intermetallic under pressure. <i>Journal of Molecular Structure</i> , 2016, 1125, 350-357.	1.8	7
44	Steganography on quantum pixel images using Shannon entropy. <i>International Journal of Quantum Information</i> , 2016, 14, 1650021.	0.6	7
45	Band-gap engineering of halogenated silicon nanowires through molecular doping. <i>Journal of Molecular Modeling</i> , 2017, 23, 314.	0.8	7
46	Effects of surface and confinement on the optical vibrational modes and dielectric function of 3C porous silicon carbide: An ab-initio study. <i>Physica B: Condensed Matter</i> , 2018, 550, 420-427.	1.3	7
47	A Density Functional Theory study of the chemical surface modification of β^2 -SiC nanopores. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2012, 177, 1482-1486.	1.7	6
48	Digital noise produced by a non discretized tent chaotic map. <i>Microelectronic Engineering</i> , 2013, 112, 264-268.	1.1	6
49	Computational Modeling of the Size Effects on the Optical Vibrational Modes of H-Terminated Ge Nanostructures. <i>Molecules</i> , 2013, 18, 4776-4785.	1.7	6
50	Theoretical study of the mechanical and electronic properties of [111]-Si nanowires with interstitial lithium. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 15795-15800.	1.1	6
51	Tin carbide monolayers as potential gas sensors. <i>Materials Letters</i> , 2021, 294, 129751.	1.3	6
52	FeMo double perovskite: From small clusters to bulk material. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2012, 177, 1514-1517.	1.7	5
53	Controlling stability and electronic properties of small-diameter SiC nanowires by fluorination. <i>International Journal of Nanotechnology</i> , 2015, 12, 218.	0.1	5
54	Electronic structure and optical vibrational modes of 3C-SiC nanowires. <i>International Journal of Nanotechnology</i> , 2015, 12, 275.	0.1	5

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55	Interstitial sodium and lithium doping effects on the electronic and mechanical properties of silicon nanowires: a DFT study. <i>Journal of Molecular Modeling</i> , 2019, 25, 338.	0.8	5
56	Silicon nanowires as acetone-adsorptive media for diabetes diagnosis. <i>Applied Surface Science</i> , 2021, 547, 149175.	3.1	5
57	Quasi-confinement, localization and optical properties in porous silicon. <i>Thin Solid Films</i> , 1997, 297, 261-264.	0.8	4
58	Mechanical and Electronic Properties of Tin Carbide Nanowires. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 1900590.	0.8	4
59	Adsorption of urea on metal-functionalized Si nanowires for a potential uremia diagnosis: A DFT study. <i>Materials Letters</i> , 2021, 298, 130016.	1.3	4
60	Hydrogen storage on bidimensional GeC with transition metal adatoms. <i>Materials Letters</i> , 2021, 300, 130239.	1.3	4
61	Phonon band structure of porous Ge from ab initio supercell calculation. <i>Microelectronic Engineering</i> , 2012, 90, 141-144.	1.1	3
62	Perovskite-Type Thin Slabs: A First-Principles Study of Their Magnetic and Electronic Properties. <i>IEEE Magnetics Letters</i> , 2016, 7, 1-3.	0.6	3
63	Bidimensional perovskite systems for spintronic applications. <i>Journal of Molecular Modeling</i> , 2017, 23, 322.	0.8	3
64	Thermoelectric transport in poly(G)-poly(C) double chains. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 136, 109136.	1.9	3
65	Molecular oxygen dissociation on tin carbide monolayers with gold adatoms. <i>Materials Letters</i> , 2021, 293, 129675.	1.3	3
66	Vibrational states in low-dimensional structures: An application to silicon quantum wires. <i>Microelectronics Journal</i> , 2008, 39, 472-474.	1.1	2
67	A current mode CMOS noise generator using multiple Bernoulli maps. <i>Microelectronic Engineering</i> , 2012, 90, 163-167.	1.1	2
68	Theoretical approach to the phonon modes and specific heat of germanium nanowires. <i>Physica B: Condensed Matter</i> , 2014, 453, 14-18.	1.3	2
69	Interactions among magnetic moments in the double perovskites $\text{Sr}_2\text{Fe}_{1+x}\text{Mo}_{1-x}\text{O}_6$. <i>Physica B: Condensed Matter</i> , 2014, 455, 103-105.	1.3	2
70	Effects of lithium on the electronic properties of porous Ge as anode material for batteries. <i>Journal of Computational Chemistry</i> , 2020, 41, 2653-2662.	1.5	2
71	Fluorinated porous silicon as sensor material for environmentally toxic gases: a first-principles study. <i>Materials Advances</i> , 2021, 2, 1072-1082.	2.6	2
72	Sodium effects on the electronic and structural properties of porous silicon for energy storage. <i>International Journal of Energy Research</i> , 0, , .	2.2	2

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73	Raman response of porous silicon. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1994, 207, 168-173.	1.2	1
74	Efficient non-vertical interband transitions in porous silicon. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1997, 241, 382-385.	1.2	1
75	Boundary conditions in theory of photothermal processes. <i>Brazilian Journal of Physics</i> , 2006, 36, 1097-1100.	0.7	1
76	Electronic and Vibrational Properties of Porous Silicon. <i>Journal of Nano Research</i> , 2009, 5, 153-160.	0.8	1
77	Tunable thermal conductivity of ternary alloy semiconductors from first-principles. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 335302.	1.3	1
78	Tunable electronic properties of silicon nanowires as sodium battery anodes. <i>International Journal of Energy Research</i> , 2022, 46, 17151-17162.	2.2	1
79	Modeling Raman scattering in porous silicon. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005, 2, 3500-3504.	0.8	0
80	3D color video conversion from 2D video sequence using stereo matching technique. , 2009, , .		0
81	Electronic and magnetic properties of an iron perovskite slab. <i>Ferroelectrics</i> , 2016, 499, 130-134.	0.3	0
82	Effect of the transition metal ratio on bulk and thin slab double perovskite Sr ₂ FeMoO ₆ . <i>Microelectronic Engineering</i> , 2016, 162, 110-113.	1.1	0
83	Confinement effect on the low temperature specific heat for ultrathin silicon nanowires: A first principles study. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 425303.	0.7	0