J F Justo

List of Publications by Year
in descending order

148 papers	3,368 citations	218381 26 h-index	155451 55 g-index
153 all docs	153 docs citations	153 times ranked	2967 citing authors

#	Article	IF	Citations
1	Interatomic potential for silicon defects and disordered phases. Physical Review B, 1998, 58, 2539-2550.	1.1	406
2	Environment-dependent interatomic potential for bulk silicon. Physical Review B, 1997, 56, 8542-8552.	1.1	364
3	Group IV Graphene- and Graphane-Like Nanosheets. Journal of Physical Chemistry C, 2011, 115, 13242-13246.	1.5	288
4	Anomalous compressibility of ferropericlase throughout the iron spin cross-over. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 8447-8452.	3.3	165
5	A Palm Tree Antipodal Vivaldi Antenna With Exponential Slot Edge for Improved Radiation Pattern. IEEE Antennas and Wireless Propagation Letters, 2015, 14, 1334-1337.	2.4	142
6	Structural properties of amorphous silicon nitride. Physical Review B, 1998, 58, 8323-8328.	1.1	140
7	Elastic Anomalies in a Spin-Crossover System: Ferropericlase at Lower Mantle Conditions. Physical Review Letters, 2013, 110, 228501.	2.9	101
8	Hydrogen role on the properties of amorphous silicon nitride. Journal of Applied Physics, 1999, 86, 1843-1847.	1.1	88
9	Intrinsic Mobility of a Dissociated Dislocation in Silicon. Physical Review Letters, 2000, 84, 3346-3349.	2.9	72
10	Parameter-free modelling of dislocation motion: The case of silicon. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2001, 81, 1257-1281.	0.8	69
11	Anomalous thermodynamic properties in ferropericlase throughout its spin crossover. Physical Review B, 2009, 80, .	1.1	68
12	The importance of GrÃ¼neisen parameters in developing interatomic potentials. Journal of Applied Physics, 1997, 82, 5378-5381.	1.1	60
13	Kink Asymmetry and Multiplicity in Dislocation Cores. Physical Review Letters, 1997, 79, 5042-5045.	2.9	53
14	Structural and electronic properties of3dtransition metal impurities in silicon carbide. Physical Review B, 2004, 69, .	1.1	52
15	Vacancy Interaction with Dislocations in Silicon: The Shuffle-Glide Competition. Physical Review Letters, 2000, 84, 2172-2175.	2.9	49
16	First-principles investigation ofaâˆ’SiNx:H. Physical Review B, 2002, 65, .	1.1	45
17	Functionalized adamantane: Building blocks for nanostructure self-assembly. Physical Review B, 2009, 80, .	1.1	43
18	Stability and plasticity of silicon nanowires: The role of wire perimeter. Physical Review B, 2007, 75, .	1.1	40

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19	Dislocation core reconstruction and its effect on dislocation mobility in silicon. Journal of Applied Physics, 1999, 86, 4249-4257.	1.1	37
20	Electronic properties and hyperfine fields of nickel-related complexes in diamond. Physical Review B, 2009, 79, .	1.1	35
21	Point defect interactions with extended defects in semiconductors. Physical Review B, 1999, 60, 4711-4714.	1.1	32
22	Analytical and Experimental Performance Evaluations of CAN-FD Bus. IEEE Access, 2018, 6, 21287-21295.	2.6	31
23	A Fern Antipodal Vivaldi Antenna for Near-Field Microwave Imaging Medical Applications. IEEE Transactions on Antennas and Propagation, 2021, 69, 8816-8829.	3.1	30
24	Isolated nickel impurities in diamond: A microscopic model for the electrically active centers. Applied Physics Letters, 2004, 84, 720-722.	1.5	28
25	Ironâ€“acceptor pairs in silicon:â€,Structure and formation processes. Journal of Applied Physics, 2001, 90, 2744-2754.	1.1	27
26	Imaging dislocation cores â€“ the way forward. Philosophical Magazine, 2006, 86, 4781-4796.	0.7	27
27	Real-Time Adaptive Object Detection and Tracking for Autonomous Vehicles. IEEE Transactions on Intelligent Vehicles, 2021, 6, 450-459.	9.4	26
28	Identification of combustion and detonation in spark ignition engines using ion current signal. Fuel, 2018, 227, 469-477.	3.4	25
29	Finite-temperature molecular-dynamics study of unstable stacking fault free energies in silicon. Physical Review B, 1998, 58, 12555-12558.	1.1	23
30	Dislocation core properties in semiconductors. Solid State Communications, 2001, 118, 651-655.	0.9	23
31	Structural and electronic properties of silicon nitride materials. International Journal of Quantum Chemistry, 1998, 70, 973-980.	1.0	22
32	Role of intrinsic defects in the electronic and optical properties of Î±-HgI2. Applied Physics Letters, 2006, 88, 011918.	1.5	22
33	Quasiharmonic elastic constants corrected for deviatoric thermal stresses. Physical Review B, 2008, 78, .	1.1	22
34	Structural, Electronic, and Vibrational Properties of Amino-adamantane and Rimantadine Isomers. Journal of Physical Chemistry A, 2010, 114, 11977-11983.	1.1	22
35	Stability of calcium and magnesium carbonates at Earth's lower mantle thermodynamic conditions. Earth and Planetary Science Letters, 2019, 506, 1-7.	1.8	21
36	Structural order and clustering in annealedÎ±â^'SiCandÎ±â^'SiC:H. Physical Review B, 2002, 65, .	1.1	20

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37	A high directive <scp>K</scp>och fractal <scp>V</scp>ivaldi antenna design for medical nearâ€field microwave imaging applications. Microwave and Optical Technology Letters, 2017, 59, 337-346.	0.9	20
38	Effects of extended defects on the properties of intrinsic and extrinsic point defects in silicon. Physica B: Condensed Matter, 1999, 273-274, 473-475.	1.3	19
39	Educational Test Bed 4.0: a teaching tool for Industry 4.0. European Journal of Engineering Education, 2020, 45, 1002-1023.	1.5	19
40	Advances and Perspectives in the Use of Carbon Nanotubes in Vaccine Development. International Journal of Nanomedicine, 2021, Volume 16, 5411-5435.	3.3	19
41	Crystalline silicon oxycarbide: Is there a native oxide for silicon carbide?. Applied Physics Letters, 2004, 84, 4845-4847.	1.5	18
42	Manganese impurities in boron nitride. Applied Physics Letters, 2006, 89, 072102.	1.5	18
43	Carbonates at high pressures: Possible carriers for deep carbon reservoirs in the Earth's lower mantle. Physical Review B, 2016, 94, .	1.1	18
44	Dislocation core reconstruction in zinc-blende semiconductors. Journal of Physics Condensed Matter, 2000, 12, 10039-10044.	0.7	16
45	3<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>d</mml:mi></mml:math>transition metal impurities in diamond: Electronic properties and chemical trends. Physical Review B, 2011, 84, .	1.1	16
46	Kinetic Monte Carlo approach to modeling dislocation mobility. Computational Materials Science, 2002, 23, 124-130.	1.4	15
47	Lanthanide impurities in wide bandgap semiconductors: A possible roadmap for spintronic devices. Applied Physics Letters, 2013, 102, .	1.5	15
48	Core effects in dislocation intersection. Scripta Materialia, 1997, 36, 707-712.	2.6	14
49	Electronic properties and hyperfine parameters of goldâ€“3d-transition-metal impurity pairs in silicon. Physical Review B, 1998, 58, 3870-3878.	1.1	14
50	Transition metal atoms encapsulated in adamantane molecules. Diamond and Related Materials, 2011, 20, 1222-1224.	1.8	14
51	Rotary Inverted Pendulum Identification for Control by Paraconsistent Neural Network. IEEE Access, 2021, 9, 74155-74167.	2.6	14
52	Interaction of As impurities with 30Â° partial dislocations in Si: An ab initio investigation. Journal of Applied Physics, 2002, 91, 5892-5895.	1.1	13
53	Palm tree coplanar Vivaldi antenna for near field radar application. Microwave and Optical Technology Letters, 2020, 62, 964-974.	0.9	13
54	Electronic charge effects on dislocation cores in silicon. Applied Physics Letters, 2004, 85, 5610-5612.	1.5	12

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55	Viscosity undulations in the lower mantle: The dynamical role of iron spin transition. Earth and Planetary Science Letters, 2015, 421, 20-26.	1.8	12
56	Two-phase flow bubble detection method applied to natural circulation system using fuzzy image processing. Nuclear Engineering and Design, 2018, 335, 255-264.	0.8	12
57	Defects in mercuric iodide: an APW investigation. Physica B: Condensed Matter, 2003, 340-342, 918-922.	1.3	11
58	A first principles investigation on hypothetical crystalline phases of silicon oxycarbide. Diamond and Related Materials, 2005, 14, 1142-1145.	1.8	11
59	Stacking fault effects in pure and n-type doped GaAs. Applied Physics Letters, 2001, 78, 907-909.	1.5	10
60	Point defect interaction with dislocations in silicon. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 309-310, 129-132.	2.6	9
61	An ab initio investigation on nickel impurities in diamond. Physica B: Condensed Matter, 2003, 340-342, 84-88.	1.3	9
62	Designing digital filter banks using wavelets. Eurasip Journal on Advances in Signal Processing, 2019, 2019, .	1.0	9
63	The Structural and Electronic Properties of Tin Oxide Nanowires: An Ab Initio Investigation. Journal of Physical Chemistry C, 2012, 116, 13382-13387.	1.5	8
64	Generalized Adaptive Polynomial Window Function. IEEE Access, 2020, 8, 187584-187589.	2.6	8
65	ELECTRONIC PROPERTIES OF COPPER-3d TRANSITION-METAL PAIRS IN SILICON. International Journal of Modern Physics B, 1999, 13, 2387-2396.	1.0	7
66	Cobalt in diamond: An ab initio investigation. Diamond and Related Materials, 2007, 16, 819-822.	1.8	7
67	Boron and nitrogen functionalized diamondoids: A first principles investigation. Diamond and Related Materials, 2010, 19, 837-840.	1.8	7
68	Spin states of iron impurities in magnesium oxide under pressure: A possible intermediate state. Physical Review B, 2013, 87, .	1.1	7
69	Model-Based Development of an Engine Control Module for a Spark Ignition Engine. IEEE Access, 2018, 6, 53638-53649.	2.6	7
70	Ultraâ€directive palm tree Vivaldi antenna with 3D substrate lens for Î¼â€biological nearâ€field microwave reduction applications. Microwave and Optical Technology Letters, 2019, 61, 713-719.	0.9	7
71	Calcium carbonate at high pressures and high temperatures: A first-principles investigation. Physics of the Earth and Planetary Interiors, 2020, 299, 106327.	0.7	7
72	Event-Triggered Non-Switching Networked Sliding Mode Control for Active Suspension System With Random Actuation Network Delay. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7521-7534.	4.7	7

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73	Functionalized few-layer silicene nanosheets: stability, elastic, structural, and electronic properties. Physical Chemistry Chemical Physics, 2022, 24, 8705-8715.	1.3	7
74	Interatomic Potential for Condensed Phases and Bulk Defects in Silicon. Materials Research Society Symposia Proceedings, 1997, 469, 217.	0.1	6
75	The Environment-Dependent Interatomic Potential Applied To Silicon Disordered Structures And Phase Transitions. Materials Research Society Symposia Proceedings, 1997, 491, 339.	0.1	6
76	Microscopic structure of the 90Â°and 30Â°partial dislocations in gallium arsenide. Journal of Physics Condensed Matter, 2002, 14, 12749-12754.	0.7	6
77	Arsenic segregation, pairing and mobility on the cores of partial dislocations in silicon. Journal of Physics Condensed Matter, 2002, 14, 12761-12765.	0.7	6
78	Transition metal impurities in 3C-SiC and 2H-SiC. Physica B: Condensed Matter, 2003, 340-342, 116-120.	1.3	6
79	Spin transition-induced anomalies in the lower mantle: implications for mid-mantle partial layering. Geophysical Journal International, 2017, 210, 765-773.	1.0	6
80	Dynamics of Dissociated Dislocations in SI: A Micro-Meso Simulation Methodology. Materials Research Society Symposia Proceedings, 1998, 538, 69.	0.1	5
81	Energetics of silicon nanowires: a molecular dynamics investigation. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 951-955.	0.8	5
82	Cobalt-related impurity centers in diamond: electronic properties and hyperfine parameters. Journal of Physics Condensed Matter, 2008, 20, 415220.	0.7	5
83	Trends on 3d transition metal impurities in diamond. Physica B: Condensed Matter, 2009, 404, 4515-4517.	1.3	5
84	Rare-earth impurities in gallium nitride: The role of the Hubbard potential. Diamond and Related Materials, 2012, 27-28, 64-67.	1.8	5
85	Twisted ultrathin silicon nanowires: A possible torsion electromechanical nanodevice. Europhysics Letters, 2014, 108, 36006.	0.7	5
86	Carbon-Related Bilayers: Nanoscale Building Blocks for Self-Assembly Nanomanufacturing. Journal of Physical Chemistry C, 2019, 123, 23195-23204.	1.5	5
87	Coronavirus and Carbon Nanotubes: Seeking Immunological Relationships to Discover Immunotherapeutic Possibilities. International Journal of Nanomedicine, 2022, Volume 17, 751-781.	3.3	5
88	The effect of a stacking fault on the electronic properties of dopants in gallium arsenide. Journal of Physics Condensed Matter, 2000, 12, 10235-10239.	0.7	4
89	Segregation of dopant atoms on extended defects in semiconductors. Physica B: Condensed Matter, 2001, 302-303, 403-407.	1.3	4
90	Electrically active centers in partial dislocations in semiconductors. Physica B: Condensed Matter, 2001, 308-310, 489-492.	1.3	4

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91	Reconstruction defects on partial dislocations in semiconductors. Applied Physics Letters, 2001, 79, 3630-3632.	1.5	4
92	Modelling Amorphous Materials: Silicon Nitride and Silicon Carbide. Defect and Diffusion Forum, 2002, 206-207, 19-30.	0.4	4
93	Titanium impurities in silicon, diamond, and silicon carbide. Brazilian Journal of Physics, 2004, 34, 602-604.	0.7	4
94	Structural and electronic properties of Ti impurities in SiC: an ab initio investigation. Computational Materials Science, 2004, 30, 57-61.	1.4	4
95	Nickel impurities in diamond: a FP-LAPW investigation. Computational Materials Science, 2004, 30, 62-66.	1.4	4
96	Ab initio investigations on the dislocation core properties in zinc-blende semiconductors. Computational Materials Science, 2004, 30, 67-72.	1.4	4
97	On the reversibility of hydrogen effects on the properties of amorphous silicon carbide. Journal of Non-Crystalline Solids, 2004, 338-340, 299-302.	1.5	4
98	Band gap states of interstitial nickel-complexes in diamond. Physica B: Condensed Matter, 2006, 376-377, 292-295.	1.3	4
99	Behavior of 3d-transition metals in different SiC polytypes. Physica B: Condensed Matter, 2006, 376-377, 378-381.	1.3	4
100	Electronic and magnetic properties of Mn and Fe impurities in III-nitride semiconductors. Diamond and Related Materials, 2007, 16, 1429-1432.	1.8	4
101	Characterization of amorphous carbon films by PECVD and plasma ion implantation: The role of fluorine and sulfur doping. Materials Chemistry and Physics, 2019, 227, 170-175.	2.0	4
102	Defect centers in a-SiNx: electronic and structural properties. Brazilian Journal of Physics, 2002, 32, 436-438.	0.7	4
103	The energetics of dislocation cores in semiconductors and their role on dislocation mobility. Physica B: Condensed Matter, 2001, 302-303, 398-402.	1.3	3
104	Electronic structure of light emitting centers in Er doped Si. Applied Physics A: Materials Science and Processing, 2003, 76, 991-997.	1.1	3
105	A theoretical model for the nickel-related defect centers in diamond. Diamond and Related Materials, 2005, 14, 380-382.	1.8	3
106	3d-Transition Metals in Cubic and Hexagonal Silicon Carbide. Materials Science Forum, 2005, 483-485, 531-534.	0.3	3
107	Publisher's Note: Anomalous thermodynamic properties in ferropericlase throughout its spin crossover [Phys. Rev. B80, 014409 (2009)]. Physical Review B, 2009, 80, .	1.1	3
108	A complete CMOS UWB Timed-Array Transmitter with a 3D vivaldi antenna array for electronic high-resolution beam spatial scanning. , 2013, , .		3

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109	A first principles investigation of mercuric iodide: bulk properties and intrinsic defects. Brazilian Journal of Physics, 2004, 34, 681-683.	0.7	3
110	A Vivaldi Antenna Palm Tree Class with Koch Square Fractal Slot Edge for Near-Field Microwave Biomedical Imaging Applications. , 2020, , .		3
111	Atomistic Mechanisms of Dislocation Mobility in Silicon. Materials Research Society Symposia Proceedings, 1997, 469, 505.	0.1	2
112	Atomistic modeling of crystal-defect mobility and interactions. Nuclear Instruments & Methods in Physics Research B, 1997, 121, 251-256.	0.6	2
113	Hydrogenated Amorphous Silicon Nitride: Structural and Electronic Properties. Materials Research Society Symposia Proceedings, 1998, 538, 555.	0.1	2
114	Use of Composite Materials to Renovate a Steel Water Pipe. Materials Science Forum, 2004, 455-456, 853-856.	0.3	2
115	Nickel-Vacancy Complexes in Diamond: An Ab-Initio Investigation. Materials Science Forum, 2005, 483-485, 1043-1046.	0.3	2
116	Interaction of dislocations with vacancies in silicon: Electronic effects. Applied Physics Letters, 2007, 90, 222106.	1.5	2
117	Crystal engineering using functionalized adamantane. Journal of Physics Condensed Matter, 2010, 22, 315303.	0.7	2
118	A didactic platform to study of CAN FD bus. , 2013, , .		2
119	Iron and manganese-related magnetic centers in hexagonal silicon carbide: A possible roadmap for spintronic devices. Journal of Applied Physics, 2015, 118, 045704.	1.1	2
120	Design of a Microstrip Line Quad-band Bandpass Filter based on the Fibonacci geometric sequence. , 2020, , .		2
121	Real-Time Knock Characterization Using Adaptive Filters and Power Estimators. IEEE Access, 2020, 8, 84371-84384.	2.6	2
122	An efficient formulation for optimization of FlexRay frame scheduling. Vehicular Communications, 2020, 24, 100234.	2.7	2
123	Paraconsistent logic approach for active noise reduction. Journal of Mechatronics Engineering, 2020, 3, 2-8.	0.1	2
124	Dopant interaction with a dislocation in silicon: local and non-local effects. Physica B: Condensed Matter, 2001, 308-310, 470-473.	1.3	1
125	Manganese Impurity in Boron Nitride and Gallium Nitride. Materials Science Forum, 2005, 483-485, 1047-1050.	0.3	1
126	Microscopic structure of nickel-dopant centers in diamond. Brazilian Journal of Physics, 2006, 36, 267-269.	0.7	1

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127	Iron in magnesium oxide at high pressures: a first principles theoretical investigation. Physica Status Solidi (B): Basic Research, 2013, 250, 750-754.	0.7	1
128	Low-cost didactic platform for real-time adaptive filtering: Application on noise cancellation. International Journal of Electrical Engineering and Education, 2022, 59, 141-157.	0.4	1
129	Digital Image Inpainting by Estimating Wavelet Coefficient Decays From Regularity Property and Besov Spaces. IEEE Access, 2019, 7, 3459-3471.	2.6	1
130	Simulation Performance Enhancement in Automotive Embedded Control Using the Unscented Transform. IEEE Access, 2020, 8, 222041-222049.	2.6	1
131	Modeling Covalent Bond with Interatomic Potentials. , 2005, , 499-507.		1
132	Electronic properties of isolated nickel in diamond. Brazilian Journal of Physics, 2004, 34, 669-671.	0.7	1
133	Active Vivaldi Antenna Timed-Array for Ultra-Wideband 3D Beamforming. Recent Patents on Engineering, 2016, 10, 121-127.	0.3	1
134	Structure and bonding of iron-acceptor pairs in silicon. Brazilian Journal of Physics, 2002, 32, 418-420.	0.7	1
135	ROADLANEâ€"The Modular Framework to Support Recognition Algorithms of Road Lane Markings. Applied Sciences (Switzerland), 2021, 11, 10783.	1.3	1
136	Chemical Trends in Electronic Properties of Gold-3D Transition Metal Impurity Pairs in Silicon. Materials Research Society Symposia Proceedings, 1997, 469, 511.	0.1	0
137	Point Defect Interactions with Extended Defects in Silicon. Materials Research Society Symposia Proceedings, 1998, 538, 419.	0.1	0
138	Unstable Stacking Fault Free Energies in Silicon through Empirical Modeling. Materials Research Society Symposia Proceedings, 1998, 539, 175.	0.1	0
139	Dislocations in Semiconductors: Core Structure and Mobility. Defect and Diffusion Forum, 2002, 200-202, 97-106.	0.4	0
140	Structural and Electronic Properties of Si_{1-x}C_xO₂. Materials Science Forum, 2005, 483-485, 577-580.	0.3	0
141	A Feedback System Dynamic Response Analysis by Root-Locus Method Using Excel Spreadsheet and XNumbers Add-In Package. International Journal of Electrical Engineering and Education, 2013, 50, 69-79.	0.4	0
142	A CMOS UWB transmitter with Vivaldi Array for Ultra-fast Beam steering microwave radar. Journal of Microwaves, Optoelectronics and Electromagnetic Applications, 2013, 12, 427-439.	0.4	0
143	Teaching microcontrollers using automotive electronic systems. International Journal of Electrical Engineering and Education, 2016, 53, 23-36.	0.4	0
144	Why Aren't Embedded Fuel-Quality Sensors in Our Cars?. IEEE Potentials, 2020, 39, 43-47.	0.2	0

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145	Silicon Nanowires: From Empirical to First Principles Modeling. Challenges and Advances in Computational Chemistry and Physics, 2010, , 173-191.	0.6	0
146	Comparison Study of Hilbert Sierpinski and Koch Fractal Structure on Coplanar Vivaldi Antenna for L/S band Application. , 2020, , .		0
147	An Antipodal Vivaldi Antenna Using Radiant Side Slot Edge Based on the Star Trek Dominion Insignia. , 2021, , .		0
148	Modeling Covalent Bond with Interatomic Potentials. , 2005, , 499-507.		0