David Tomanek

List of Publications by Year
in descending order

243 papers	32,366 citations	9234 74 h-index	3903 177 g-index
247 all docs	247 docs citations	247 times ranked	25554 citing authors

#	Article	IF	Citations
1	Phosphorene: An Unexplored 2D Semiconductor with a High Hole Mobility. ACS Nano, 2014, 8, 4033-4041.	7.3	5,474
2	Crystalline Ropes of Metallic Carbon Nanotubes. Science, 1996, 273, 483-487.	6.0	5,226
3	Unusually High Thermal Conductivity of Carbon Nanotubes. Physical Review Letters, 2000, 84, 4613-4616.	2.9	2,775
4	Semiconducting Layered Blue Phosphorus: A Computational Study. Physical Review Letters, 2014, 112, 176802.	2.9	996
5	Phase Coexistence and Metal-Insulator Transition in Few-Layer Phosphorene: A Computational Study. Physical Review Letters, 2014, 113, 046804.	2.9	556
6	Self-Assembly of Tubular Fullerenes. The Journal of Physical Chemistry, 1995, 99, 10694-10697.	2.9	499
7	Designing Electrical Contacts to<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>Monolayers: A Computational Study. Physical Review Letters, 2012, 108, 156802.	2.9	475
8	Electron-phonon coupling and superconductivity in alkali-intercalatedC60solid. Physical Review Letters, 1992, 68, 526-529.	2.9	473
9	High Mobility WSe₂ p- and n-Type Field-Effect Transistors Contacted by Highly Doped Graphene for Low-Resistance Contacts. Nano Letters, 2014, 14, 3594-3601.	4.5	399
10	A novel hybrid carbon material. Nature Nanotechnology, 2007, 2, 156-161.	15.6	369
11	Simple theory for the electronic and atomic structure of small clusters. Physical Review B, 1983, 28, 665-673.	1.1	345
12	Effect of van der Waals Interactions on the Raman Modes in Single Walled Carbon Nanotubes. Physical Review Letters, 2001, 86, 3895-3898.	2.9	340
13	Low-Resistance 2D/2D Ohmic Contacts: A Universal Approach to High-Performance WSe₂, MoS₂, and MoSe₂ Transistors. Nano Letters, 2016, 16, 1896-1902.	4.5	334
14	Effect of SOCl2 Treatment on Electrical and Mechanical Properties of Single-Wall Carbon Nanotube Networks. Journal of the American Chemical Society, 2005, 127, 5125-5131.	6.6	330
15	Catalytic Growth of Single-Wall Carbon Nanotubes: AnAb InitioStudy. Physical Review Letters, 1997, 78, 2393-2396.	2.9	320
16	Collective plasmon excitations inC60clusters. Physical Review Letters, 1991, 67, 2690-2693.	2.9	310
17	Structural rigidity and low frequency vibrational modes of long carbon tubules. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1993, 27, 93-96.	1.0	309
18	Improved Carrier Mobility in Few-Layer MoS₂ Field-Effect Transistors with Ionic-Liquid Gating. ACS Nano, 2013, 7, 4449-4458.	7.3	301

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19	Spin Currents in Rough Graphene Nanoribbons: Universal Fluctuations and Spin Injection. Physical Review Letters, 2008, 100, 177207.	2.9	288
20	Structure and bonding of small semiconductor clusters. Physical Review B, 1987, 36, 1208-1217.	1.1	280
21	Theory and observation of highly asymmetric atomic structure in scanning-tunneling-microscopy images of graphite. Physical Review B, 1987, 35, 7790-7793.	1.1	276
22	First-principles theory of atomic-scale friction. Physical Review Letters, 1990, 64, 3054-3057.	2.9	255
23	Calculation of Magic Numbers and the Stability of Small Si Clusters. Physical Review Letters, 1986, 56, 1055-1058.	2.9	251
24	First-principles calculation of highly asymmetric structure in scanning-tunneling-microscopy images of graphite. Physical Review B, 1988, 37, 8327-8336.	1.1	243
25	Electronic and structural properties of multiwall carbon nanotubes. Physical Review B, 1998, 58, R16001-R16004.	1.1	241
26	Conducting linear chains of sulphur inside carbon nanotubes. Nature Communications, 2013, 4, 2162.	5.8	228
27	Growth regimes of carbon clusters. Physical Review Letters, 1991, 67, 2331-2334.	2.9	220
28	Calculation of an Atomically Modulated Friction Force in Atomic-Force Microscopy. Europhysics Letters, 1991, 15, 887-892.	0.7	205
29	Magnetism in All-Carbon Nanostructures with Negative Gaussian Curvature. Physical Review Letters, 2003, 91, 237204.	2.9	200
30	A metallic mosaic phase and the origin of Mott-insulating state in 1T-TaS2. Nature Communications, 2016, 7, 10956.	5.8	196
31	Thermal Contraction of Carbon Fullerenes and Nanotubes. Physical Review Letters, 2004, 92, 015901.	2.9	195
32	Contact Dependence of Carrier Injection in Carbon Nanotubes: AnAbÂInitioStudy. Physical Review Letters, 2006, 96, 076802.	2.9	194
33	Calculation of elastic strain and electronic effects on surface segregation. Physical Review B, 1985, 32, 5051-5056.	1.1	186
34	Melting the fullerenes: A molecular dynamics study. Physical Review Letters, 1994, 72, 2418-2421.	2.9	185
35	Calculation of electronic and structural properties ofBC3. Physical Review B, 1988, 37, 3134-3136.	1.1	182
36	Strain-induced metal-semiconductor transition in monolayers and bilayers of gray arsenic: A computational study. Physical Review B, 2015, 91, .	1.1	178

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37	Fractional Quantum Conductance in Carbon Nanotubes. Physical Review Letters, 2000, 84, 1974-1977.	2.9	166
38	â€œBucky Shuttleâ€•Memory Device: Synthetic Approach and Molecular Dynamics Simulations. Physical Review Letters, 1999, 82, 1470-1473.	2.9	155
39	Jahn-Teller effect for the negatively chargedC60molecule: Analogy with the silicon vacancy. Physical Review B, 1991, 44, 12106-12108.	1.1	146
40	Superconductivity in alkali intercalated C60. Journal of Physics and Chemistry of Solids, 1992, 53, 1473-1485.	1.9	142
41	Role of Electronic Excitations in Ion Collisions with Carbon Nanostructures. Physical Review Letters, 2007, 99, 016104.	2.9	142
42	Diamond fragments as building blocks of functional nanostructures. Physical Review B, 2004, 70, .	1.1	137
43	Two-Dimensional Phosphorus Carbide: Competition between sp² and sp³ Bonding. Nano Letters, 2016, 16, 3247-3252.	4.5	137
44	Control of Surface and Edge Oxidation on Phosphorene. ACS Applied Materials & Interfaces, 2017, 9, 9126-9135.	4.0	135
45	Spectroscopic characterization of Stone-Wales defects in nanotubes. Physical Review B, 2004, 69, .	1.1	134
46	Calculation of chemisorption and absorption induced surface segregation. Surface Science, 1982, 114, 11-22.	0.8	133
47	Effect of intertube coupling on the electronic structure of carbon nanotube ropes. Physical Review B, 1998, 58, R13314-R13317.	1.1	130
48	Direct Observation of Optically Induced Transient Structures in Graphite Using Ultrafast Electron Crystallography. Physical Review Letters, 2008, 101, 077401.	2.9	128
49	Designing Isoelectronic Counterparts to Layered Group V Semiconductors. ACS Nano, 2015, 9, 8284-8290.	7.3	128
50	Tiling Phosphorene. ACS Nano, 2014, 8, 12763-12768.	7.3	122
51	Defective fullerenes and nanotubes as molecular magnets:â€,Anab initiostudy. Physical Review B, 2003, 68, .	1.1	114
52	Thermal line broadening in small metal clusters. Physical Review B, 1989, 40, 2749-2751.	1.1	113
53	Morphology and Stability of Growing Multiwall Carbon Nanotubes. Physical Review Letters, 1997, 79, 2065-2068.	2.9	106
54	Stability of multishell fullerenes. Physical Review B, 1993, 48, 15461-15464.	1.1	105

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55	Electronic interwall interactions and charge redistribution in multiwall nanotubes. Physical Review B, 2001, 65, .	1.1	103
56	Microscopic Formation Mechanism of Nanotube Peapods. Physical Review Letters, 2002, 88, 185502.	2.9	101
57	Self-assembly of long chain alkanes and their derivatives on graphite. Journal of Chemical Physics, 2008, 128, 124709.	1.2	99
58	Stiffness of a solid composed ofC60clusters. Physical Review B, 1991, 44, 6562-6565.	1.1	97
59	Laser-Driven Atomic Pump. Physical Review Letters, 1999, 82, 5373-5376.	2.9	93
60	Quasiparticle calculation of valence band offset of AlAs-GaAs(001). Solid State Communications, 1988, 66, 585-588.	0.9	91
61	Cavities and Channels in Electrides. Journal of the American Chemical Society, 1996, 118, 7329-7336.	6.6	91
62	High Stability of Faceted Nanotubes and Fullerenes of Multiphase Layered Phosphorus: A Computational Study. Physical Review Letters, 2014, 113, 226801.	2.9	91
63	Electronic and structural properties of carbon nanohorns. Physical Review B, 2000, 62, R2291-R2294.	1.1	90
64	Photogalvanic Effects in Heteropolar Nanotubes. Physical Review Letters, 2000, 85, 1512-1515.	2.9	85
65	Scrolls and nested tubes in multiwall carbon nanotubes. Carbon, 2002, 40, 1123-1130.	5.4	84
66	Ab initiocalculation of chemisorption systems: H on Pd(001) and Pd(110). Physical Review B, 1991, 43, 4699-4713.	1.1	83
67	Chemical and Electronic Repair Mechanism of Defects in MoS₂ Monolayers. ACS Nano, 2017, 11, 9989-9996.	7.3	80
68	Adsorption and decomposition of ammonia on a W(110) surface: Photoemission fingerprinting and interpretation of the core level binding energies using the equivalent core approximation. Surface Science, 1982, 119, 133-149.	0.8	79
69	Zipper Mechanism of Nanotube Fusion: Theory and Experiment. Physical Review Letters, 2004, 92, 075504.	2.9	78
70	Stability and Fragmentation of Complex Structures in Ferrofluids. Physical Review Letters, 1995, 74, 3049-3052.	2.9	77
71	Theory for the Atomic Force Microscopy of Deformable Surfaces. Physical Review Letters, 1989, 63, 876-879.	2.9	76
72	Precursors toC60fullerene formation. Physical Review B, 1992, 46, 7326-7328.	1.1	75

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73	Itinerant ferromagnetism in heterostructured C/BN nanotubes. Physical Review B, 2003, 67, .	1.1	75
74	Photoexfoliation of Graphene from Graphite: AnAbÂInitioStudy. Physical Review Letters, 2010, 104, 208302.	2.9	75
75	How free are encapsulated atoms in C60?. Chemical Physics Letters, 1994, 221, 453-458.	1.2	74
76	Carbon foam: Spanning the phase space between graphite and diamond. Physical Review B, 2001, 64, .	1.1	74
77	Structural Transition in Layered As_{1â€“x}P_x Compounds: A Computational Study. Nano Letters, 2015, 15, 6042-6046.	4.5	74
78	Noble gas temperature control of metal clusters: A molecular dynamics study. Journal of Chemical Physics, 1997, 107, 3071-3079.	1.2	71
79	Modeling extended contacts for nanotube and graphene devices. Physical Review B, 2008, 77, .	1.1	71
80	Evidence of Diamond Nanowires Formed inside Carbon Nanotubes from Diamantane Dicarboxylic Acid. Angewandte Chemie - International Edition, 2013, 52, 3717-3721.	7.2	71
81	Synthesis and Transformation of Linear Adamantane Assemblies inside Carbon Nanotubes. ACS Nano, 2012, 6, 8674-8683.	7.3	70
82	Evaluation of quasiparticle energies for semiconductors without inversion symmetry. Physical Review B, 1989, 40, 3162-3168.	1.1	69
83	Electronic model for energies, relaxations and reconstruction trends at metal surfaces. Surface Science, 1985, 163, 503-515.	0.8	67
84	Fullereneynes: a new family of porous fullerenes. Chemical Physics Letters, 1993, 204, 8-14.	1.2	67
85	Electronic Structure of (n,0) Zigzag Carbon Nanotubes:Â Cluster and Crystal Approach. Journal of Physical Chemistry A, 1998, 102, 975-981.	1.1	66
86	Effect of structural defects on the thermal conductivity of graphene: From point to line defects to haeckelites. Physical Review B, 2014, 89, .	1.1	64
87	Assembly of Ringâ€Shaped Phosphorus within Carbon Nanotube Nanoreactors. Angewandte Chemie - International Edition, 2017, 56, 1850-1854.	7.2	64
88	Cold fusion: How close can deuterium atoms come inside palladium?. Physical Review Letters, 1989, 63, 59-61.	2.9	63
89	Stability of M@C60 endohedral complexes. Chemical Physics Letters, 1993, 208, 79-85.	1.2	62
90	Quantum Size Effects in the Polarizability of Carbon Fullerenes. Physical Review Letters, 2004, 92, 215501.	2.9	62

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91	Microscopic mechanism of fullerene fusion. Physical Review B, 2004, 70, .	1.1	62
92	Effect of adsorbates on surface phonon modes: H on Pd(001) and Pd(110). Physical Review B, 1991, 44, 13053-13062.	1.1	59
93	Electronic structure of single-wall, multiwall, and filled carbon nanotubes. Physical Review B, 1997, 55, 13980-13988.	1.1	59
94	Ab InitioCalculation of Coverage-Dependent Adsorption Properties of H on Pd(001). Physical Review Letters, 1986, 57, 2594-2597.	2.9	57
95	Formation and Properties of Selenium Double-Helices inside Double-Wall Carbon Nanotubes: Experiment and Theory. ACS Nano, 2013, 7, 5607-5613.	7.3	57
96	Structural properties of Fe crystals. Physical Review B, 1993, 47, 95-99.	1.1	56
97	Computer simulation of hydrogen embrittlement in metals. Nature, 1993, 362, 435-437.	13.7	55
98	Hydrogenation of Single-Wall Carbon Nanotubes Using Polyamine Reagents:â€‰ Combined Experimental and Theoretical Study. Journal of the American Chemical Society, 2008, 130, 2296-2303.	6.6	55
99	Coherent control of photocurrents in graphene and carbon nanotubes. Physical Review B, 2000, 61, 7669-7677.	1.1	54
100	Total-energy calculations forN2dissociation on Fe(111): Characterization of precursor and dissociative states. Physical Review B, 1985, 31, 2488-2490.	1.1	53
101	Semiempirical theory for surface core-level shifts. Solid State Communications, 1982, 41, 273-279.	0.9	52
102	Mesoscopic origami with graphite: scrolls, nanotubes, peapods. Physica B: Condensed Matter, 2002, 323, 86-89.	1.3	52
103	Energetics and electronic structure of a polyacetylene chain contained in a carbon nanotube. Physical Review B, 2003, 67, .	1.1	52
104	Energetics and packing of fullerenes in nanotube peapods. Physical Review B, 2005, 71, .	1.1	48
105	Real-TimeAbÂInitioSimulations of Excited Carrier Dynamics in Carbon Nanotubes. Physical Review Letters, 2006, 97, 126104.	2.9	47
106	Orientational Melting in Carbon Nanotube Ropes. Physical Review Letters, 2000, 84, 1483-1486.	2.9	45
107	Mechanism of fullerene hydrogenation by polyamines:Ab initiodensity functional calculations. Physical Review B, 2008, 78, .	1.1	45
108	Continuum approach for long-wavelength acoustic phonons in quasi-two-dimensional structures. Physical Review B, 2016, 94, .	1.1	45

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109	Quasiparticle band gaps for ultrathin GaAs/AlAs(001) superlattices. Physical Review Letters, 1989, 63, 1495-1498.	2.9	44
110	Theory of elastic tipâ€“surface interactions in atomic force microscopy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 479.	1.6	44
111	Limits of Resolution in Atomic Force Microscopy Images of Graphite. Europhysics Letters, 1991, 15, 49-54.	0.7	43
112	Quasiparticle band offset at the (001) interface and band gaps in ultrathin superlattices of GaAs-AlAs heterojunctions. Physical Review B, 1990, 41, 10058-10067.	1.1	42
113	Ionicity of the MC60 bond in M@C60 endohedral complexes. Chemical Physics Letters, 1995, 243, 42-44.	1.2	42
114	Collective electronic excitations in small metal clusters. Physical Review B, 1991, 43, 6804-6807.	1.1	40
115	Strain-controlled fundamental gap and structure of bulk black phosphorus. Physical Review B, 2016, 94, .	1.1	40
116	Degenerately Doped Transition Metal Dichalcogenides as Ohmic Homojunction Contacts to Transition Metal Dichalcogenide Semiconductors. ACS Nano, 2019, 13, 5103-5111.	7.3	39
117	Computational study of the thermal conductivity in defective carbon nanostructures. Physical Review B, 2012, 86, .	1.1	38
118	Onset of nanotube decay under extreme thermal and electronic excitations. Physica B: Condensed Matter, 2002, 323, 78-85.	1.3	37
119	Interplay between Structure and Magnetism inMo12S9I9Nanowires. Physical Review Letters, 2006, 96, 125502.	2.9	37
120	Rigid crystalline phases of polymerized fullerenes. Physical Review B, 2004, 70, .	1.1	36
121	Magic numbers in small iron clusters: A first-principles study. Chemical Physics Letters, 2014, 613, 59-63.	1.2	36
122	A water-resilient carbon nanotube based strain sensor for monitoring structural integrity. Journal of Materials Chemistry A, 2019, 7, 19996-20005.	5.2	36
123	Hyperpolarizability of the C60 fullerene cluster. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1993, 25, 181-184.	1.0	35
124	Interpreting core-level spectra of oxidizing phosphorene: Theory and experiment. Physical Review B, 2015, 92, .	1.1	35
125	Thermodynamic interpretation of core-level binding energies in adsorbates. Surface Science, 1983, 126, 112-119.	0.8	34
126	Ï*f*-states contribution to the conductivity of BC3. Solid State Communications, 1988, 67, 515-518.	0.9	34

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127	Field-induced unraveling of carbon nanotubes. Chemical Physics Letters, 1997, 265, 667-672.	1.2	34
128	Minimum model for the electronic structure of twisted bilayer graphene and related structures. Physical Review B, 2018, 98, .	1.1	34
129	Origin of torsion-induced conductance oscillations in carbon nanotubes. Physical Review B, 2008, 78, .	1.1	33
130	Topologically Protected Conduction State at Carbon Foam Surfaces: AnAb initioStudy. Physical Review Letters, 2014, 112, 026803.	2.9	32
131	Multi-adatom interactions on metal surfaces. Surface Science, 1986, 173, 538-554.	0.8	31
132	Mechanical stability of Pd-H systems: A molecular-dynamics study. Physical Review B, 1992, 46, 8099-8108.	1.1	31
133	Search for the largest two-dimensional aggregates of boron: Anab initiostudy. Physical Review B, 2011, 83, .	1.1	31
134	Spontaneous Graphitization of Ultrathin Cubic Structures: A Computational Study. Nano Letters, 2014, 14, 7126-7130.	4.5	31
135	Shear instability in twisted bilayer graphene. Physical Review B, 2018, 98, .	1.1	31
136	Unique Structural and Transport Properties of Molybdenum Chalcohalide Nanowires. Physical Review Letters, 2007, 99, 085503.	2.9	30
137	Designing rigid carbon foams. Journal of Physics Condensed Matter, 2010, 22, 334220.	0.7	29
138	Unusually Stable Helical Coil Allotrope of Phosphorus. Nano Letters, 2016, 16, 7865-7869.	4.5	29
139	Optimizing Charge Injection across Transition Metal Dichalcogenide Heterojunctions: Theory and Experiment. ACS Nano, 2017, 11, 3904-3910.	7.3	29
140	Changing the Phosphorus Allotrope from a Square Columnar Structure to a Planar Zigzag Nanoribbon by Increasing the Diameter of Carbon Nanotube Nanoreactors. Nano Letters, 2020, 20, 1280-1285.	4.5	29
141	Total energy calculations for extremely large clusters: The recursive approach. Solid State Communications, 1993, 86, 607-612.	0.9	28
142	Stability ofC60fullerite intercalation compounds. Physical Review B, 1993, 47, 6711-6720.	1.1	28
143	Formation and Stability of Cellular Carbon Foam Structures: AnAbÂInitioStudy. Physical Review Letters, 2012, 109, 135501.	2.9	27
144	Simulated scanning tunneling microscopy images of few-layer phosphorus capped by graphene and hexagonal boron nitride monolayers. Physical Review B, 2015, 91, .	1.1	27

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145	Bonding and Energy Dissipation in a Nanohook Assembly. Physical Review Letters, 2003, 91, 165503.	2.9	26
146	Molecular Self-Assembly of Functionalized Fullerenes on a Metal Surface. Physical Review Letters, 2009, 102, 056102.	2.9	26
147	Hydrogen-Induced Polymorphism of the Pd(110) Surface. Physical Review Letters, 1997, 79, 1329-1332.	2.9	25
148	Local curvature and stability of two-dimensional systems. Physical Review B, 2014, 90, .	1.1	24
149	Interfacing graphene and related 2D materials with the 3D world. Journal of Physics Condensed Matter, 2015, 27, 133203.	0.7	24
150	Collective electronic excitations and their damping in small alkali clusters. Chemical Physics Letters, 1993, 205, 521-528.	1.2	23
151	Can photo excitations heal defects in carbon nanotubes?. Chemical Physics Letters, 2004, 392, 209-213.	1.2	23
152	Optimizing Electronic Structure and Quantum Transport at the Graphene-Si(111) Interface: AnAbÂInitioDensity-Functional Study. Physical Review Letters, 2013, 110, 176805.	2.9	23
153	Effect of Net Charge on the Relative Stability of 2D Boron Allotropes. Nano Letters, 2019, 19, 1359-1365.	4.5	23
154	Synthesis of high-density carbon nanotube films by microwave plasma chemical vapor deposition. Diamond and Related Materials, 2001, 10, 1947-1951.	1.8	22
155	Electronic structure and properties of rhombohedrally polymerized C60. Journal of Chemical Physics, 2001, 115, 5637-5641.	1.2	22
156	Stability differences and conversion mechanism between nanotubes and scrolls. Physical Review B, 2004, 69, .	1.1	22
157	Trapping cold atoms using surface-grown carbon nanotubes. Physical Review A, 2009, 79, .	1.0	22
158	Can CF₃-Functionalized La@C₆₀ Be Isolated Experimentally and Become Superconducting?. Nano Letters, 2017, 17, 3402-3408.	4.5	22
159	Assembly of Ringâ€Shaped Phosphorus within Carbon Nanotube Nanoreactors. Angewandte Chemie, 2017, 129, 1876-1880.	1.6	21
160	Disintegration of finite carbon chains in electric fields. Chemical Physics Letters, 1997, 264, 345-350.	1.2	20
161	Efficient growth and characterization of one-dimensional transition metal tellurides inside carbon nanotubes. Nanoscale, 2020, 12, 17185-17190.	2.8	20
162	SchlÃ¼teret al. reply. Physical Review Letters, 1992, 69, 213-213.	2.9	19

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163	Stability of fullerene-based systems. Journal of Physics and Chemistry of Solids, 1993, 54, 1679-1684.	1.9	19
164	Imaging the interlayer interactions of multiwall carbon nanotubes using scanning tunneling microscopy and spectroscopy. Applied Physics Letters, 2001, 79, 4210-4212.	1.5	19
165	Photodesorption of oxygen from carbon nanotubes. Physical Review B, 2004, 70, .	1.1	19
166	Structural and magnetic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Tc</mml:mtext></mml:mrow><mml:mi>n</mml:mi></mml:msub> metalofullerenes: First-principles predictions. Physical Review B, 2010, 81, .	1.1	19
167	Microscopic Mechanism of the Helix-to-Layer Transformation in Elemental Group VI Solids. Nano Letters, 2018, 18, 4908-4913.	4.5	19
168	Palladium-graphite interaction potentials based on first-principles calculations. Physical Review B, 1991, 43, 12623-12625.	1.1	18
169	X-ray spectroscopic and quantumâ€“chemical study of carbon tubes produced in arc-discharge. Chemical Physics Letters, 1998, 289, 341-349.	1.2	18
170	Carbon-based nanotechnology on a supercomputer. Journal of Physics Condensed Matter, 2005, 17, R413-R459.	0.7	18
171	Hydrogen-induced disintegration of fullerenes and nanotubes: Anab initiostudy. Physical Review B, 2009, 80, .	1.1	18
172	Nanomechanical Energy Storage in Twisted Nanotube Ropes. Physical Review Letters, 2012, 109, 255501.	2.9	18
173	Electronic structure and transport in graphene/haeckelite hybrids: an ab initio study. 2D Materials, 2015, 2, 035001.	2.0	18
174	Introduction to the Important and Exciting Aspects of Carbon-Nanotube Science and Technology. Topics in Applied Physics, 2007, , 1-12.	0.4	18
175	Surface core-level binding energy shifts in alloys. Solid State Communications, 1981, 39, 987-989.	0.9	17
176	Thermal effects in the equilibrium structure and size distribution of small Si clusters. Physical Review B, 1989, 39, 5361-5365.	1.1	17
177	Does hydrogen pre-melt palladium clusters?. Chemical Physics Letters, 1997, 264, 39-43.	1.2	17
178	Stability, electronic structure and reactivity of the polymerized fullerite forms. Journal of Physics and Chemistry of Solids, 2000, 61, 1901-1911.	1.9	17
179	Two-Dimensional Mechanical Metamaterials with Unusual Poisson Ratio Behavior. Physical Review Applied, 2018, 10, .	1.5	17
180	Self-assembly of magnetic nanostructures. Zeitschrift FÃ¼r Physik D-Atoms Molecules and Clusters, 1997, 40, 539-541.	1.0	16

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181	Compositional ordering and quantum transport in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Mo</mml:mi><mml:mn>6</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mrow><mml:mn>9</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow> mathvariant="normal">I</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:mrow></mml:math>nanowires:<i>Ab initio</i>calculations. Physical Review B, 2008, 77, .	1.1	16
182	Reinforcing multiwall carbon nanotubes by electron beam irradiation. Journal of Applied Physics, 2010, 108, 084314.	1.1	16
183	Limits of mechanical energy storage and structural changes in twisted carbon nanotube ropes. Physical Review B, 2013, 88, .	1.1	16
184	Graphitic Phase of NaCl. Bulk Properties and Nanoscale Stability. Journal of Physical Chemistry Letters, 2014, 5, 4014-4019.	2.1	16
185	Designing an All-Carbon Membrane for Water Desalination. Physical Review Applied, 2019, 12, .	1.5	16
186	Theory for the atomic force microscopy of layered elastic surfaces. Journal of Physics Condensed Matter, 1992, 4, 4233-4249.	0.7	15
187	Effect of electron and hole doping on the structure of C, Si, and S nanowires. Physical Review B, 2007, 75, .	1.1	15
188	Nanoconfinement effects on the reversibility of hydrogen storage in ammonia borane: A first-principles study. Journal of Chemical Physics, 2011, 134, 214501.	1.2	15
189	Lanthanide- and actinide-based fullerite compounds: potential AxC60 superconductors?. Chemical Physics Letters, 1993, 203, 438-443.	1.2	14
190	Stability and elastic properties of hydrogen-loadedTi1â^’xAlxalloys: Anab initiostudy. Physical Review B, 1995, 51, 9569-9580.	1.1	14
191	Revealing Subsurface Vibrational Modes by Atom-Resolved Damping Force Spectroscopy. Physical Review Letters, 2009, 102, 195503.	2.9	14
192	In-plane breathing and shear modes in low-dimensional nanostructures. Carbon, 2020, 157, 364-370.	5.4	14
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