H-Ch Weissker

List of Publications by Year
in descending order

54 papers	1,881 citations	236833 25 h-index	254106 43 g-index
55 all docs	55 docs citations	55 times ranked	1945 citing authors

#	Article	IF	Citations
1	Optical properties of $$hbox {Ag}_{29}$$(BDT)$$_{12}$$(TPP)$$_4$$ in the VIS and UV and influence of ligand modeling based on real-time electron dynamics. Theoretical Chemistry Accounts, 2021, 140, 1.	0.5	1
2	Crucial Role of Conjugation in Monolayer-Protected Metal Clusters with Aromatic Ligands: Insights from the Archetypal Au₁₄₄L₆₀ Cluster Compounds. Journal of Physical Chemistry Letters, 2021, 12, 9262-9268.	2.1	7
3	Robustness of the chiral-icosahedral golden shell I-Au60 in multi-shell structures. Journal of Chemical Physics, 2021, 155, 204307.	1.2	1
4	How metallic are noble-metal clusters? Static screening and polarizability in quantum-sized silver and gold nanoparticles. Nanoscale, 2020, 12, 4452-4458.	2.8	7
5	Chiral-Icosahedral (I) Symmetry in Ubiquitous Metallic Cluster Compounds (145A,60X): Structure and Bonding Principles. Accounts of Chemical Research, 2019, 52, 34-43.	7.6	62
6	Plasmonic quantum size effects in silver nanoparticles are dominated by interfaces and local environments. Nature Physics, 2019, 15, 275-280.	6.5	140
7	Tetrahedral (T) Closed-Shell Cluster of 29 Silver Atoms & 12 Lipoate Ligands, [Ag₂₉(R-Î±-LA)₁₂]^(3â^'): Antibacterial and Antifungal Activity. ACS Applied Nano Materials, 2018, 1, 1595-1602.	2.4	28
8	Identifying Electronic Modes by Fourier Transform from Î´-Kick Time-Evolution TDDFT Calculations. Journal of Chemical Theory and Computation, 2018, 14, 6417-6426.	2.3	19
9	Chiral symmetry breaking yields the I-Au60 perfect golden shell of singular rigidity. Nature Communications, 2018, 9, 3352.	5.8	18
10	Optical Properties of Noble Metal Clusters from the Ab Initio Perspective. , 2018, , 546-558.		1
11	In Search of the Quantum-Electronic Origin of Color Change: Elucidation of the Subtle Effects of Alloying with Copper on â‰ˆ1.8 nm Gold Nanoclusters. Journal of Physical Chemistry C, 2017, 121, 5753-5760.	1.5	11
12	Classical and ab Initio Plasmonics Meet at Sub-nanometric Noble Metal Rods. ACS Photonics, 2017, 4, 1484-1493.	3.2	57
13	Is the largest aqueous gold cluster a superatom complex? Electronic structure & optical response of the structurally determined Au₁₄₆(p-MBA)₅₇. Nanoscale, 2017, 9, 18629-18634.	2.8	9
14	MicroED Structure of Au₁₄₆(p-MBA)₅₇ at Subatomic Resolution Reveals a Twinned FCC Cluster. Journal of Physical Chemistry Letters, 2017, 8, 5523-5530.	2.1	100
15	From small clusters to larger nanoparticles: Quantum calculations in TDDFT. , 2016, , .		0
16	Surface plasmons in quantum-sized noble-metal clusters: TDDFT quantum calculations and the classical picture of charge oscillations. Physical Chemistry Chemical Physics, 2015, 17, 28379-28386.	1.3	39
17	Temperature dependence of the radiative lifetimes in Ge and Si nanocrystals. Nanoscale, 2015, 7, 4942-4948.	2.8	7
18	Optical Spectra of the Special Au₁₄₄ Gold-Cluster Compounds: Sensitivity to Structure and Symmetry. Journal of Physical Chemistry C, 2015, 119, 11250-11259.	1.5	37

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19	Optical response of quantum-sized Ag and Au clusters â€“ cage vs. compact structures and the remarkable insensitivity to compression. Physical Chemistry Chemical Physics, 2014, 16, 12495-12502.	1.3	17
20	Aspect-ratio- and size-dependent emergence of the surface-plasmon resonance in gold nanorods â€“ an ab initio TDDFT study. Physical Chemistry Chemical Physics, 2014, 16, 1820-1823.	1.3	70
21	Information on quantum states pervades the visible spectrum of the ubiquitous Au144(SR)60 gold nanocluster. Nature Communications, 2014, 5, 3785.	5.8	127
22	Trends and Properties of 13-Atom Agâ€“Au Nanoalloys I: Structure and Electronic Properties. Journal of Physical Chemistry C, 2013, 117, 21450-21459.	1.5	20
23	Effect of Alloying on the Optical Properties of Agâ€“Au Nanoparticles. Journal of Physical Chemistry C, 2013, 117, 3062-3068.	1.5	83
24	Ab Initio Electronic Gaps of Ge Nanodots: The Role of Self-Energy Effects. Journal of Physical Chemistry C, 2013, 117, 14229-14234.	1.5	12
25	Structure and properties of nanoscale materials: theory and atomistic computer simulation. International Journal of Nanotechnology, 2012, 9, 576.	0.1	1
26	Dynamical response function in sodium studied by inelastic x-ray scattering spectroscopy. Physical Review B, 2011, 84, .	1.1	27
27	Dynamical response function in sodium and aluminum from time-dependent density-functional theory. Physical Review B, 2011, 84, .	1.1	37
28	Luminescence and absorption in germanium and silicon nanocrystals: The influence of compression, surface reconstruction, optical excitation, and spin-orbit splitting. Physical Review B, 2011, 83, .	1.1	16
29	Optical properties of pure and core-shell noble-metal nanoclusters from TDDFT: The influence of the atomic structure. Physical Review B, 2011, 84, .	1.1	100
30	Dynamic structure factor and dielectric function of silicon for finite momentum transfer: Inelastic x-ray scattering experiments andab initiocalculations. Physical Review B, 2010, 81, .	1.1	50
31	Alloying effects on the optical properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Ge</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>from time-dependent density functional theory and comparison with effective-medium theory. Physical Review B, 2009, 79, .	1.1	51
32	Interpolation between spectra satisfying sum rules. Physical Review B, 2009, 79, .	1.1	3
33	Accuracy of the pseudopotential approximation inab initiotheoretical spectroscopies. Physical Review B, 2008, 78, .	1.1	27
34	Signatures of Short-Range Many-Body Effects in the Dielectric Function of Silicon for Finite Momentum Transfer. Physical Review Letters, 2006, 97, 237602.	2.9	40
35	INFLUENCE OF STRUCTURAL RELAXATION ON THE OPTICAL AND ELECTRONIC PROPERTIES OF Ge and Si NANOCRYSTALS. , 2005, , .		0
36	Optical properties of Si and Ge nanocrystals: Parameter-free calculations. Physica Status Solidi (B): Basic Research, 2005, 242, 3053-3063.	0.7	35

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37	Classical versus ab initio structural relaxation: electronic excitations and optical properties of Ge nanocrystals embedded in an SiC matrix. Journal of Physics Condensed Matter, 2005, 17, 643-651.	0.7	1
38	GERMANIUM AND SILICON NANOCRYSTALS â€“ EXCITATION ENERGIES AND COMPRESSION. , 2005, , .		0
39	Structure- and spin-dependent excitation energies and lifetimes of Si and Ge nanocrystals fromab initiocalculations. Physical Review B, 2004, 69, .	1.1	65
40	Classical versus ab initio structural relaxation: electronic excitations and optical properties of Ge nanocrystals embedded in a SiC matrix. Materials Research Society Symposia Proceedings, 2004, 832, 313.	0.1	0
41	Influence of structural relaxation on the optical and electronic properties of embedded Ge nanocrystals. Surface Science, 2004, 566-568, 961-964.	0.8	2
42	Long-range contribution to the exchange-correlation kernel of time-dependent density functional theory. Physical Review B, 2004, 69, .	1.1	184
43	Electronic excitations in Si and Ge nanocrystals: Parameterfree calculations. Physica Status Solidi C: Current Topics in Solid State Physics, 2004, 1, S163-S172.	0.8	4
44	Quantum structures in SiC. Applied Surface Science, 2003, 212-213, 820-825.	3.1	15
45	Oscillator strengths and excitation energies of Ge and Si nanocrystals from ab initio supercell calculations. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 101, 39-42.	1.7	10
46	Validity of effective-medium theory for optical properties of embedded nanocrystallites fromab initiosupercell calculations. Physical Review B, 2003, 67, .	1.1	55
47	Structural relaxation in Si and Ge nanocrystallites: Influence on the electronic and optical properties. Physical Review B, 2003, 67, .	1.1	59
48	Excitation Energies and Radiative Lifetimes ofGe1â^'xSixNanocrystals: Alloying Versus Confinement Effects. Physical Review Letters, 2003, 90, 085501.	2.9	35
49	GW self-energy calculations for systems with huge supercells. Physical Review B, 2002, 66, .	1.1	54
50	Towards Quantum Structures in SiC. Materials Science Forum, 2002, 389-393, 737-742.	0.3	14
51	Optical properties of Ge and Si nanocrystallites fromab initiocalculations. II. Hydrogenated nanocrystallites. Physical Review B, 2002, 65, .	1.1	94
52	Optical properties of Ge and Si nanocrystallites fromab initiocalculations. I. Embedded nanocrystallites. Physical Review B, 2002, 65, .	1.1	57
53	Prediction of Optical Properties of Si and Ge Dots in SiC. Materials Science Forum, 2001, 353-356, 413-416.	0.3	3
54	Calculation of optical properties and density of states for systems with huge unit cells. Physical Review B, 2001, 64, .	1.1	12