Wei Cao

List of Publications by Year in descending order

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218677 214800 2,876 125 26 47 citations h-index g-index papers 125 125 125 3982 citing authors docs citations times ranked all docs

#	Article	IF	CITATIONS
1	Aqueous Dispersions of Few-Layered and Monolayered Hexagonal Boron Nitride Nanosheets from Sonication-Assisted Hydrolysis: Critical Role of Water. Journal of Physical Chemistry C, 2011, 115, 2679-2685.	3.1	519
2	Interfacial ferroelectricity by van der Waals sliding. Science, 2021, 372, 1462-1466.	12.6	262
3	Fabrication of FeNi hydroxides double-shell nanotube arrays with enhanced performance for oxygen evolution reaction. Applied Catalysis B: Environmental, 2020, 261, 118193.	20.2	99
4	Robust superlubricity by strain engineering. Nanoscale, 2019, 11, 2186-2193.	5.6	67
5	Massâ€Production of Mesoporous MnCo ₂ O ₄ Spinels with Manganese(IV)―and Cobalt(II)â€Rich Surfaces for Superior Bifunctional Oxygen Electrocatalysis. Angewandte Chemie, 2017, 129, 15173-15177.	2.0	61
6	Preparation and first-principles study for electronic structures of BiOI/BiOCl composites with highly improved photocatalytic and adsorption performances. Journal of Molecular Catalysis A, 2016, 423, 1-11.	4.8	52
7	Adsorption and separation of CO2/CH4 mixtures using nanoporous adsorbents by molecular simulation. Fluid Phase Equilibria, 2014, 362, 227-234.	2.5	49
8	Cryorolling impacts on microstructure and mechanical properties of AISI 316 LN austenitic stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 709, 270-276.	5.6	42
9	Generalized Scaling Law of Structural Superlubricity. Nano Letters, 2019, 19, 7735-7741.	9.1	42
10	The pH-controlled morphology transition of BiVO4 photocatalysts from microparticles to hollow microspheres. Materials Letters, 2015, 145, 52-55.	2.6	41
11	Brazing ZrB2-SiC ceramics to Ti6Al4V alloy with TiCu-based amorphous filler. Journal of Manufacturing Processes, 2017, 30, 516-522.	5.9	41
12	Molecular Simulation Study of the Adsorption and Diffusion of a Mixture of CO ₂ /CH ₄ in Activated Carbon: Effect of Textural Properties and Surface Chemistry. Journal of Chemical & Samp; Engineering Data, 2016, 61, 4139-4147.	1.9	40
13	Magnetic Superatoms in VLi $<$ sub $>$ $<$ i $>$ n $<$ i $>$ $<$ sub $>$ $<$ ($<$ i $>$ n $<$ i $>$ $=$ 1 \hat{a} \in "13) Clusters: A First-Principles Prediction. Journal of Physical Chemistry A, 2013, 117, 13025-13036.	2.5	38
14	Molecular Origin of Superlubricity between Graphene and a Highly Hydrophobic Surface in Water. Journal of Physical Chemistry Letters, 2019, 10, 2978-2984.	4.6	37
15	Origin of hydration lubrication of zwitterions on graphene. Nanoscale, 2018, 10, 16887-16894.	5.6	36
16	Controlled synthesis of hierarchical flower-like Sb 2 WO 6 microspheres: Photocatalytic and superhydrophobic property. Journal of Industrial and Engineering Chemistry, 2016, 39, 93-100.	5.8	34
17	First-Principles Prediction of Two-Dimensional B ₃ C ₂ P ₃ and B ₂ C ₄ P ₂ : Structural Stability, Fundamental Properties, and Renewable Energy Applications. Journal of Physical Chemistry Letters, 2021, 12, 3436-3442.	4.6	34
18	Replication of Leaf Surface Structures for Light Harvesting. Scientific Reports, 2015, 5, 14281.	3.3	33

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19	Separation of Two-Electron Photoexcited Atomic Processes near the Inner-Shell Threshold. Physical Review Letters, 2009, 102, 143001.	7.8	32
20	Metallic Contact between MoS ₂ and Ni via Au Nanoglue. Small, 2018, 14, e1704526.	10.0	32
21	Water in Narrow Carbon Nanotubes: Roughness Promoted Diffusion Transition. Journal of Physical Chemistry C, 2018, 122, 19124-19132.	3.1	32
22	Resonant inelastic x-ray scattering at the limit of subfemtosecond natural lifetime. Journal of Chemical Physics, 2011, 134, 144308.	3.0	30
23	Strain enhanced lithium adsorption and diffusion on silicene. Physical Chemistry Chemical Physics, 2017, 19, 6563-6568.	2.8	30
24	Synthesis of Ag-loaded Sb2WO6 microsphere with enhanced photocatalytic ability for organic dyes degradations under different light irradiations. Journal of Molecular Liquids, 2018, 272, 27-36.	4.9	30
25	Exfoliation of Two-Dimensional Materials: The Role of Entropy. Journal of Physical Chemistry Letters, 2019, 10, 981-986.	4.6	30
26	Chemical effects in the \hat{K}^2 X-ray emission spectra of sulfur. Nuclear Instruments & Methods in Physics Research B, 2007, 260, 642-646.	1.4	28
27	First Observation of Two-Electron One-Photon Transitions in Single-Photon <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>K</mml:mi></mml:math> -Shell Double Ionization. Physical Review Letters, 2011. 107. 053001.	7.8	27
28	Controlled cold rolling effect on microstructure and mechanical properties of Ce-modified SAF 2507 super duplex stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138352.	5.6	27
29	Relative detection efficiency of back- and front-illuminated charge-coupled device cameras for x-rays between 1keV and 18keV. Review of Scientific Instruments, 2007, 78, 093102.	1.3	26
30	Application of the high-resolution grazing-emission x-ray fluorescence method for impurities control in semiconductor nanotechnology. Journal of Applied Physics, 2009, 105, 086101.	2.5	25
31	Molecular Interactions of Protein with TiO $<$ sub $>$ 2 $<$ /sub $>$ by the AFM-Measured Adhesion Force. Langmuir, 2017, 33, 11626-11634.	3.5	25
32	Ultrafast, Stable Ionic and Molecular Sieving through Functionalized Boron Nitride Membranes. ACS Applied Materials & Samp; Interfaces, 2019, 11, 30430-30436.	8.0	25
33	Recent understanding of solid-liquid friction in ionic liquids. Green Chemical Engineering, 2021, 2, 145-157.	6.3	25
34	The magnetic properties of FexZn1â^'xO synthesized via the solid-state reaction route: Experiment and theory. Journal of Magnetism and Magnetic Materials, 2013, 340, 5-9.	2.3	24
35	Effect of Rolling Temperature on Microstructure Evolution and Mechanical Properties of AISI316LN Austenitic Stainless Steel. Materials, 2018, 11, 1557.	2.9	23
36	Loading AgCl@Ag on phosphotungstic acid modified macrocyclic coordination compound: Z-scheme photocatalyst for persistent pollutant degradation and hydrogen evolution. Journal of Colloid and Interface Science, 2019, 547, 50-59.	9.4	23

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37	A computational study of antireflection structures bio-mimicked from leaf surface morphologies. Solar Energy, 2016, 131, 131-137.	6.1	22
38	Transition Metal Adsorbed-Doped ZnO Monolayer: 2D Dilute Magnetic Semiconductor, Magnetic Mechanism, and Beyond 2D. ACS Omega, 2017, 2, 1192-1197.	3.5	22
39	Observation of ultralow-level Al impurities on a silicon surface by high-resolution grazing emission x-ray fluorescence excited by synchrotron radiation. Physical Review B, 2009, 80, .	3.2	21
40	Double <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>K</mml:mi></mml:mrow></mml:math> -shell photoionization and hypersatellite x-ray transitions of <mml:math display="inline" xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mo><mml:mn>12</mml:mn><mml:mo>â@½</mml:mo><mml:mo><mml:mi>Z</mml:mi>ZZZ<td>2.5 no>⩽</td><td>21 </td></mml:mo><</mml:mo></mml:math>	2.5 no>⩽	21
41	Physical Review A, 2010, 82, . Ionic-liquid assisted ultrasonic synthesis of BiOCl with controllable morphology and enhanced visible light and sunlight photocatalytic activity. Journal of Molecular Catalysis A, 2016, 418-419, 132-137.	4.8	21
42	Nanosecond laser coloration on stainless steel surface. Scientific Reports, 2017, 7, 7092.	3.3	21
43	Extrusion temperature impacts on biometallic Mg-2.0Zn-0.5Zr-3.0Gd (wt%) solid-solution alloy. Journal of Alloys and Compounds, 2018, 739, 468-480.	5.5	21
44	Dissociation of chloromethanes upon resonant lf^* excitation studied by x-ray scattering. Journal of Chemical Physics, 2013, 139, 134302.	3.0	19
45	Microstructures, Mechanical Properties, and Corrosion Behavior of As-Cast Mg–2.0Zn–0.5Zr–xGd (wt %) Biodegradable Alloys. Materials, 2018, 11, 1564.	2.9	19
46	AFM Study of pHâ€Dependent Adhesion of Single Protein to TiO ₂ Surface. Advanced Materials Interfaces, 2019, 6, 1900411.	3.7	19
47	Determination of the small amount of proteins interacting with TiO2 nanotubes by AFM-measurement. Biomaterials, 2019, 192, 368-376.	11.4	19
48	Family of Two-Dimensional Transition Metal Dichlorides: Fundamental Properties, Structural Defects, and Environmental Stability. Journal of Physical Chemistry Letters, 2022, 13, 2165-2172.	4.6	19
49	Harnessing photo/electro-catalytic activity <i>via</i> nano-junctions in ternary nanocomposites for clean energy. Nanoscale, 2020, 12, 23461-23479.	5.6	18
50	Surface plasmon-driven photocatalytic activity of Ni@NiO/NiCO ₃ core–shell nanostructures. RSC Advances, 2021, 11, 2733-2743.	3.6	18
51	Exploring Mechanisms of Hydration and Carbonation of MgO and Mg(OH) ₂ in Reactive Magnesium Oxide-Based Cements. Journal of Physical Chemistry C, 2022, 126, 6196-6206.	3.1	18
52	Grazing angle X-ray fluorescence from periodic structures on silicon and silica surfaces. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2014, 98, 65-75.	2.9	17
53	Introducing Magnetism into 2D Nonmagnetic Inorganic Layered Crystals: A Brief Review from First-Principles Aspects. Crystals, 2018, 8, 24.	2.2	17
54	Depth profiling of dopants implanted in Si using the synchrotron radiation based highâ€resolution grazing emission technique. X-Ray Spectrometry, 2012, 41, 98-104.	1.4	16

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55	High-energy-resolution grazing emission X-ray fluorescence applied to the characterization of thin Al films on Si. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2013, 88, 136-149.	2.9	16
56	Effect of brazing temperature on microstructure and mechanical properties of TiAl/ZrB2 joint brazed with CuTiZrNi filler. Journal of Manufacturing Processes, 2019, 46, 170-176.	5.9	16
57	Phase and morphology controllable synthesis of superhydrophobic Sb2O3 via a solvothermal method. Journal of Alloys and Compounds, 2017, 721, 149-156.	5.5	16
58	DoubleK-shell ionization of Al induced by photon and electron impact. Physical Review A, 2009, 79, .	2.5	15
59	Diffusion of CO ₂ /CH ₄ confined in narrow carbon nanotube bundles. Molecular Physics, 2016, 114, 2530-2540.	1.7	15
60	Fluorination to enhance superlubricity performance between self-assembled monolayer and graphite in water. Journal of Colloid and Interface Science, 2021, 596, 44-53.	9.4	15
61	Depth profiles of Al impurities implanted in Si wafers determined by means of the high-resolution grazing emission X-ray fluorescence technique. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2010, 65, 445-449.	2.9	14
62	Ionic hydration of Na+ inside carbon nanotubes, under electric fields. Fluid Phase Equilibria, 2013, 353, 1-6.	2.5	14
63	The effect of H2O2 desorption on achieving improved selectivity for direct synthesis of H2O2 over TiO2(B)/anatase supported Pd catalyst. Catalysis Communications, 2017, 89, 69-72.	3.3	14
64	Water Diffusion in Wiggling Graphene Membranes. Journal of Physical Chemistry Letters, 2019, 10, 7251-7258.	4.6	14
65	Vacuum ultraviolet excitation luminescence spectroscopy of few-layered MoS ₂ . Journal of Physics Condensed Matter, 2016, 28, 015301.	1.8	13
66	Molecular Behavior of Water on Titanium Dioxide Nanotubes: A Molecular Dynamics Simulation Study. Journal of Chemical & Engineering Data, 2016, 61, 4131-4138.	1.9	12
67	Role of ultrafast dissociation in the fragmentation of chlorinated methanes. Journal of Chemical Physics, 2018, 148, 174301.	3.0	12
68	Vacuum brazing ZSCf composite ceramics to TC4 alloy with Ag-Cu filler. Journal of Materials Research and Technology, 2020, 9, 8627-8635.	5.8	12
69	In-situ quantification and density functional theory elucidation of phase transformation in carbon steel during quenching and partitioning. Acta Materialia, 2021, 221, 117361.	7.9	12
70	First-principles study of monolayer MoS2 with deficient and excessive Mo and S (n= \hat{a} '3 \hat{a} †'3) clusters on 5 \hat{A} — 5 supercells. Computational Materials Science, 2016, 121, 124-130.	3.0	11
71	Nickel nanoparticle-activated MoS ₂ for efficient visible light photocatalytic hydrogen evolution. Nanoscale, 2022, 14, 8601-8610.	5.6	11
72	Shape-controlled hydrothermal synthesis of superhydrophobic and superoleophilic BaMnF4micro/nanostructures. CrystEngComm, 2016, 18, 3585-3593.	2.6	10

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73	Porous coordination polymer coatings fabricated from Cu ₃ (BTC) ₂ ·3H ₂ O with excellent superhydrophobic and superoleophilic properties. New Journal of Chemistry, 2016, 40, 10554-10559.	2.8	10
74	Orienting spins in dually doped monolayer MoS ₂ : from one-sided to double-sided doping. Chemical Communications, 2017, 53, 5428-5431.	4.1	10
75	Structural and dynamical properties of chlorinated hydrocarbons studied with resonant inelastic x-ray scattering. Journal of Chemical Physics, 2016, 144, 134309.	3.0	9
76	Mechano-nanofluidics: water transport through CNTs by mechanical actuation. Microfluidics and Nanofluidics, 2018, 22, 1.	2.2	9
77	Brazing Ti-48Al-2Nb-2Cr Alloys with Cu-Based Amorphous Alloy Filler. Applied Sciences (Switzerland), 2018, 8, 920.	2.5	9
78	Excellent Protein Immobilization and Stability on Heterogeneous C–TiO ₂ Hybrid Nanostructures: A Single Protein AFM Study. Langmuir, 2020, 36, 9323-9332.	3 . 5	9
79	Synchrotron-radiation-based determination of XeL-subshell Coster-Kronig yields: A reexamination via high-resolution x-ray spectroscopy. Physical Review A, 2010, 81, .	2.5	8
80	Carbon nanostructure based mechano-nanofluidics. Journal of Micromechanics and Microengineering, 2018, 28, 033001.	2.6	8
81	Impacts of ionic liquid capping on the morphology and photocatalytic performance of SbPO4 crystals. CrystEngComm, 2018, 20, 4305-4312.	2.6	8
82	Impact of various dopant elements on the electronic structure of Cu ₂ ZnSnS ₄ (CZTS) thin films: a DFT study. CrystEngComm, 2020, 22, 5786-5791.	2.6	8
83	Vacancy-Induced Niobate Perovskite-Tungsten Bronze Composite for Synergetic Tuning of Ferroelectricity and Band Gaps. Journal of Physical Chemistry C, 2021, 125, 8890-8898.	3.1	8
84	L-subshell Coster-Kronig yields of palladium determined via synchrotron-radiation-based high-resolution x-ray spectroscopy. Physical Review A, 2009, 80, .	2.5	7
85	X-RAY PHOTOEMISSION ELECTRON MICROSCOPE DETERMINATION OF ORIGINS OF ROOM TEMPERATURE FERROMAGNETISM AND PHOTOLUMINESCENCE IN HIGH-(font>Co	>FttMs.	7
86	Formation of stable		

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91	Impacts of Stress Relief Treatments on Microstructure, Mechanical and Corrosion Properties of Metal Active-Gas Welding Joint of 2205 Duplex Stainless Steel. Materials, 2020, 13, 4272.	2.9	7
92	Ab initio study of hydrogen sensing in Pd and Pt functionalized GaN [0 0 0 1] nanowires. Applied Surface Science, 2020, 512, 146019.	6.1	7
93	Unveiling Non-isothermal Crystallization of CaOâ€"Al _{O₃â€"Na₂Oâ€"Li₂Oâ€"Li₂3} â€"Na ₂ Oâ€"Li ₂ Oâ€"Li ₂ Oâ€"Li ₂ Dâ€"Li _{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Li_{Dâ€"Na Dâ€"Na<}}}}}}}}}}}	sub>O–: 4.0	SiO ₂
94	Adsorption of N-Butane/I-Butane in Zeolites: Simulation and Theory Study. Separation Science and Technology, 2014, 49, 1215-1226.	2.5	6
95	[Ni(2,2′-bipy)3]Cl2 activated sepiolite clay with high photocatalytic and oil–water separation abilities. Journal of Industrial and Engineering Chemistry, 2019, 80, 33-42.	5.8	6
96	Synergistic effect of Ni–Ag–rutile TiO ₂ ternary nanocomposite for efficient visible-light-driven photocatalytic activity. RSC Advances, 2020, 10, 36930-36940.	3.6	6
97	The interaction of two-dimensional \hat{l}_{\pm} - and \hat{l}_{\pm} -phosphorus carbide with environmental molecules: a DFT study. Physical Chemistry Chemical Physics, 2020, 22, 11307-11313.	2.8	6
98	Hydrophilicity effect on CO ₂ /CH ₄ separation using carbon nanotube membranes: insights from molecular simulation. Molecular Simulation, 2017, 43, 502-509.	2.0	5
99	One-pot hydrothermal synthesis of ZnC ₄ O ₄ concave microspheres with superhydrophobic and superoleophilic properties. CrystEngComm, 2017, 19, 528-536.	2.6	5
100	SbVO ₄ nanoparticles synthesized via three facile one-pot methods: controllable morphologies and superhydrophobic coatings. Dalton Transactions, 2017, 46, 12988-12995.	3.3	5
101	Comparison of Synthetic Routes for Large-scale Synthesis of Spherical BiVO ₄ with Photocatalytic and Superhydrophobic Properties. Chemistry Letters, 2018, 47, 148-151.	1.3	5
102	Incorporation of Si atoms into CrCoNiFe high-entropy alloy: a DFT study. Journal of Physics Condensed Matter, 2021, 33, 135703.	1.8	5
103	Magnetic properties of the Cu-doped ZnOï¼sexperiments and theory. Wuli Xuebao/Acta Physica Sinica, 2014, 63, 157502.	0.5	5
104	High-resolutionKMMradiative Auger x-ray emission spectra of calcium induced by synchrotron radiation. Physical Review A, 2011, 83, .	2.5	4
105	Quantification of strain through linear dichroism in the Si 1s edge X-ray absorption spectra of strained Si1â^'xGex thin films. Applied Surface Science, 2013, 265, 358-362.	6.1	4
106	Adsorption of binary CO ₂ /CH ₄ mixtures using carbon nanotubes: Effects of confinement and surface functionalization. Separation Science and Technology, 2016, 51, 1079-1092.	2.5	4
107	Antireflective design of Si-based photovoltaics via biomimicking structures on black butterfly scales. Solar Energy, 2020, 204, 738-747.	6.1	4

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109	STRUCTURAL COLOR MODEL BASED ON SURFACE MORPHOLOGY OF MORPHO BUTTERFLY WING SCALE. Surface Review and Letters, 2016, 23, 1650046.	1.1	3
110	Evolution of lithium clusters to superatomic Li3O+. Applied Physics Letters, 2017, 111, .	3.3	3
111	The effect of surface wrinkles on the properties of water in graphene slit pores. Molecular Simulation, 2020, 46, 604-615.	2.0	3
112	Discerning phase-matrices for individual nitride inclusions within ultra-high-strength steel: experiment driven DFT investigation. Physical Chemistry Chemical Physics, 2022, 24, 1456-1461.	2.8	3
113	Interlayer Registry Index of Layered Transition Metal Dichalcogenides. Journal of Physical Chemistry Letters, 2022, 13, 3353-3359.	4.6	3
114	Testing spatial noncommutativity via magnetic hyperfine structure induced by fractional angular momentum of Rydberg system. Europhysics Letters, 2012, 98, 40002.	2.0	2
115	Silicon 1s near edge X-ray absorption fine structure spectroscopy of functionalized silicon nanocrystals. Journal of Chemical Physics, 2016, 145, 154703.	3.0	2
116	Enhanced diffusion on oscillating surfaces through synchronization. Physical Review E, 2018, 97, 022141.	2.1	2
117	Double K-shell photoionization of low-Z atoms and He-like ions. European Physical Journal: Special Topics, 2009, 169, 23-27.	2.6	1
118	Single-photon double K-shell ionization of low-Z atoms. Journal of Physics: Conference Series, 2010, 212, 012006.	0.4	1
119	Breakdown of ionic character of molecular alkali bromides in inner-valence photoionization. Journal of Chemical Physics, 2014, 140, 204321.	3.0	1
120	Microstructural Evolution Induced Mechanical Property Enhancement in Cryogenically Rolled Ceâ€Modified SAF2507 Super Duplex Stainless Steel. Advanced Engineering Materials, 2020, 22, 2000516.	3.5	1
121	The progress of quantitatively description of membrane process based on the mechanism of nanoconfined mass transfer. Chinese Science Bulletin, 2017, 62, 223-232.	0.7	1
122	Many-body calculation of helium 1D–3D term intervals for 1snd (nâ€,=â€,12 â^¼ 20) high Rydberg states. Canadian Journal of Physics, 2006, 84, 1097-1106.	1.1	0
123	Biogas upgrading using single-walled carbon nanotubes by molecular simulation. Molecular Simulation, 2017, 43, 1034-1044.	2.0	0
124	Adsorption of CO2 on the ï‰-Fe (0001) surface: insights from density functional theory. RSC Advances, 2021, 11, 6825-6830.	3.6	0
125	Quantitative prediction of yield strength of highly alloyed complex steel using high energy synchrotron X-ray diffractometry. Journal of Materials Research and Technology, 2022, , .	5.8	0