

Rui-Zhi Qiu

List of Publications by Year in descending order

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Version: 2024-02-01

48
papers

690
citations

566801

15
h-index

610482

24
g-index

48
all docs

48
docs citations

48
times ranked

488
citing authors

#	ARTICLE	IF	CITATIONS
1	Model anisotropic quantum Hall states. <i>Physical Review B</i> , 2012, 85, .	1.1	69
2	Interfacial properties and electron structure of Al/B4C interface: A first-principles study. <i>Journal of Nuclear Materials</i> , 2016, 478, 227-235.	1.3	63
3	Spatial density oscillations in trapped dipolar condensates. <i>Physical Review A</i> , 2010, 82, .	1.0	50
4	Differences in the Existence States of Hydrogen in UO_2 and PuO_2 from DFT + $\langle i \rangle \text{U} \langle /i \rangle$ Calculations. <i>Journal of Physical Chemistry C</i> , 2016, 120, 18445-18451.	1.5	34
5	First-principles DFT +U calculations on the energetics of Ga in Pu, Pu_2O_3 and PuO_2 . <i>Computational Materials Science</i> , 2016, 122, 263-271.	1.4	29
6	First-principles explorations of the universal picture of oxide layer structure over metallic plutonium. <i>Corrosion Science</i> , 2019, 153, 236-248.	3.0	29
7	New Insights into the Formation of Hyperstoichiometric Plutonium Oxides. <i>Journal of Physical Chemistry C</i> , 2015, 119, 101-108.	1.5	26
8	Quantum Hall effects in fast-rotating Fermi gases with anisotropic dipolar interaction. <i>Physical Review A</i> , 2011, 83, .	1.0	25
9	First-Principles Energetics of Some Nonmetallic Impurity Atoms in Plutonium Dioxide. <i>Journal of Physical Chemistry C</i> , 2015, 119, 14879-14889.	1.5	24
10	Phase Segregation, Transition, or New Phase Formation of Plutonium Dioxide: The Roles of Transition Metals. <i>Inorganic Chemistry</i> , 2019, 58, 4350-4364.	1.9	21
11	Energetics of intrinsic point defects in aluminium via orbital-free density functional theory. <i>Philosophical Magazine</i> , 2017, 97, 2164-2181.	0.7	18
12	Plutonium Oxidation States in Complex Molecular Solids. <i>Journal of Physical Chemistry C</i> , 2019, 123, 12096-12103.	1.5	18
13	Design, Synthesis and High HER Performances of 3D Ni/Mo Sulfide on Ni Foam. <i>ChemCatChem</i> , 2020, 12, 1647-1652.	1.8	18
14	A theoretical study of hydrogen atoms adsorption and diffusion on PuO_2 (110) surface. <i>Journal of Alloys and Compounds</i> , 2016, 666, 287-291.	2.8	16
15	Adsorption and dissociation of H_2 on PuO_2 (110) surface: A density functional theory study. <i>Journal of Alloys and Compounds</i> , 2016, 654, 567-573.	2.8	16
16	Unraveling the highest oxidation states of actinides in solid-state compounds with a particular focus on plutonium. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 4732-4737.	1.3	16
17	New Insights into the Crystal Structures of Plutonium Hydrides from First-Principles Calculations. <i>Journal of Physical Chemistry C</i> , 2018, 122, 10103-10112.	1.5	15
18	Light impurity atoms as the probes for the electronic structures of actinide dioxides. <i>Computational Materials Science</i> , 2018, 142, 25-31.	1.4	15

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19	A molecular dynamics simulation study of irradiation induced defects in gold nanowire. Nuclear Instruments & Methods in Physics Research B, 2017, 405, 22-30.	0.6	14
20	Effective Coulomb interaction in actinides from linear response approach. Computational Materials Science, 2020, 171, 109270.	1.4	14
21	Electronic structures of topological insulator Bi ₂ Te ₃ surfaces with non-conventional terminations. New Journal of Physics, 2016, 18, 093015.	1.2	13
22	Stability and optical properties of plutonium monoxide from first-principle calculation. Scientific Reports, 2017, 7, 12167.	1.6	13
23	Dynamical properties of a trapped dipolar Fermi gas at finite temperature. Physical Review A, 2011, 83, .	1.0	10
24	Dependency of f states in fluorite-type XO ₂ (X = Ce, Th, U) on the stability and electronic state of doped transition metals. Physical Chemistry Chemical Physics, 2019, 21, 25962-25975.	1.3	10
25	First-Principles Insights into the Oxidation States and Electronic Structures of Ceria-Based Binary, Ternary, and Quaternary Oxides. Journal of Physical Chemistry C, 2019, 123, 175-184.	1.5	10
26	Thermodynamical Stability of Plutonium Monoxide with Carbon Substitution. Journal of Physical Chemistry C, 2018, 122, 22821-22828.	1.5	9
27	Chemical State of U in U-N-O Ternary System from First-Principles Calculations. Journal of Physical Chemistry C, 2019, 123, 17155-17162.	1.5	9
28	Diffusion behavior of hydrogen in oxygen saturated and unsaturated plutonium dioxide: An ab initio molecular dynamics study. Journal of Alloys and Compounds, 2020, 834, 155113.	2.8	8
29	Structural, mechanical, dynamical and electronic properties and high-pressure behavior of Mo ₂ GeC: A first-principles study. Computational Materials Science, 2017, 137, 306-313.	1.4	7
30	Insights into the Phase Relations in a U-N System Using a Cluster Formula. Inorganic Chemistry, 2017, 56, 3550-3555.	1.9	7
31	New theoretical insights into the actual oxidation states of uranium in the solid-state compounds. Journal of Nuclear Materials, 2021, 543, 152563.	1.3	7
32	Phase transition and intrinsic metric of dipolar fermions in the quantum Hall regime. Physical Review B, 2018, 97, .	1.1	6
33	Thermodynamical stability of substoichiometric plutonium monocarbide from first-principles calculations. Physical Chemistry Chemical Physics, 2020, 22, 9009-9013.	1.3	6
34	Single-mode approximation for quantum Hall states with broken rotational symmetry. Physical Review B, 2013, 88, .	1.1	5
35	Molecular reactions and oxidation corrosion on UN (001) surface under exposure to environment gases: A DFT study. Journal of Nuclear Materials, 2020, 533, 152095.	1.3	5
36	First-principles studies on the charge density wave in uranium. Modelling and Simulation in Materials Science and Engineering, 2016, 24, 055011.	0.8	4

#	ARTICLE	IF	CITATIONS
37	New insight into the intrinsic instability of fcc ZrH ₂ by energy-resolved local bonding analysis. RSC Advances, 2016, 6, 19150-19154.	1.7	4
38	Density-functional study of plutonium monoxide monohydride. Journal of Nuclear Materials, 2017, 485, 181-188.	1.3	4
39	Revealing the microscopic mechanism of PuO ₂ and δ -Pu ₂ O ₃ in resisting plutonium hydrogenation via ab initio molecular dynamics simulation. Journal of Alloys and Compounds, 2021, 874, 159904.	2.8	4
40	Insights into the Metal-CO Bond in O ₂ M(δ -CO) (M = Cr, Mo, W, Nd, and U) Complexes. Inorganic Chemistry, 2022, 61, 2066-2075.	1.9	4
41	Exploring the sub-stoichiometric behavior of plutonium mononitride. RSC Advances, 2020, 10, 24877-24881.	1.7	3
42	Hydrogen diffusion in plutonium hydrides from first principles. Journal of Nuclear Materials, 2021, 557, 153247.	1.3	3
43	 <small>xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:tbl_struct="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:struct="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:struct-no-template="http://www.elsevier.com/xml/common/struct-bib/dtd"/></small>	0.9	2
44	Metallic and anti-metallic properties of hydrogen adsorbed AnO ₂ (An = Th, U, and Pu) surfaces. Physical Chemistry Chemical Physics, 2021, 23, 878-885.	1.3	2
45	Low-Temperature CO Oxidation over the Pt-TiN Interfacial Dual Sites. ChemCatChem, 2021, 13, 4610-4617.	1.8	2
46	Theoretical Assignment of Oxidation State of Uranium in Binary, Ternary, and Quaternary Tellurides. Journal of Physical Chemistry C, 2021, 125, 1029-1040.	1.5	2
47	Matrix-Isolation Infrared Spectra and Electronic Structure Calculations for Dinitrogen Complexes with Uranium Trioxide Molecules UO ₃ (δ -NN) ₄ . Inorganic Chemistry, 2022, 61, 11075-11083.	1.9	1
48	Molecular dynamics simulation studies of displacement cascade induced defects in gold nanotubes. Nuclear Instruments & Methods in Physics Research B, 2019, 461, 142-148.	0.6	0