

Lourdes Gracia

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104
papers

3,143
citations

35
h-index

49
g-index

106
ext. papers

3,498
ext. citations

3.7
avg, IF

5.21
L-index

#	Paper	IF	Citations
104	Toward an Understanding of the Growth of Ag Filaments on Ag_2WO_4 and Their Photoluminescent Properties: A Combined Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 1229-1239	3.8	111
103	Facet-dependent photocatalytic and antibacterial properties of Ag_2WO_4 crystals: combining experimental data and theoretical insights. <i>Catalysis Science and Technology</i> , 2015 , 5, 4091-4107	5.5	110
102	Density functional theory study of the brookite surfaces and phase transitions between natural titania polymorphs. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 23417-23	3.4	103
101	Experimental and Theoretical Study on the Structure, Optical Properties, and Growth of Metallic Silver Nanostructures in Ag_3PO_4 . <i>Journal of Physical Chemistry C</i> , 2015 , 119, 6293-6306	3.8	92
100	ZnWO nanocrystals: synthesis, morphology, photoluminescence and photocatalytic properties. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 1923-1937	3.6	77
99	Structural and electronic analysis of the atomic scale nucleation of Ag on Ag_2WO_4 induced by electron irradiation. <i>Scientific Reports</i> , 2014 , 4, 5391	4.9	76
98	Presence of excited electronic state in CaWO_4 crystals provoked by a tetrahedral distortion: An experimental and theoretical investigation. <i>Journal of Applied Physics</i> , 2011 , 110, 043501	2.5	74
97	Effects of surface stability on the morphological transformation of metals and metal oxides as investigated by first-principles calculations. <i>Nanotechnology</i> , 2015 , 26, 405703	3.4	70
96	Toward Understanding the Photocatalytic Activity of PbMoO_4 Powders with Predominant (111), (100), (011), and (110) Facets. A Combined Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 21382-21395	3.8	69
95	Theoretical Study on the Molecular Mechanism for the Reaction of VO_2^+ with C_2H_4 . <i>Journal of Physical Chemistry A</i> , 2003 , 107, 3107-3120	2.8	68
94	A Joint Experimental and Theoretical Study on the Nanomorphology of CaWO_4 Crystals. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 20113-20119	3.8	66
93	Characterization of the high-pressure structures and phase transformations in SnO_2 . A density functional theory study. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 6479-85	3.4	65
92	DFT Study of the Reaction between VO_2^+ and C_2H_6 . <i>Organometallics</i> , 2004 , 23, 730-739	3.8	61
91	High-pressure study of the behavior of mineral barite by x-ray diffraction. <i>Physical Review B</i> , 2011 , 84,	3.3	59
90	Structural and vibrational study of cubic Sb_2O_3 under high pressure. <i>Physical Review B</i> , 2012 , 85,	3.3	57
89	Chemical structure and reactivity by means of quantum chemical topology analysis. <i>Computational and Theoretical Chemistry</i> , 2015 , 1053, 17-30	2	53
88	Photoluminescence and Photocatalytic Properties of Ag PO Microcrystals: An Experimental and Theoretical Investigation. <i>ChemPlusChem</i> , 2016 , 81, 202-212	2.8	52

87	Elucidating the real-time Ag nanoparticle growth on Ag_2WO_4 during electron beam irradiation: experimental evidence and theoretical insights. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 5352-9	3.6	52
86	Identifying and rationalizing the morphological, structural, and optical properties of [Formula: see text]-AgMoO microcrystals, and the formation process of Ag nanoparticles on their surfaces: combining experimental data and first-principles calculations. <i>Science and Technology of Advanced Materials</i> , 2015 , 16, 065002	7.1	52
85	Compression of scheelite-type SrMoO_4 under quasi-hydrostatic conditions: Redefining the high-pressure structural sequence. <i>Journal of Applied Physics</i> , 2013 , 113, 123510	2.5	52
84	Mechanism of Antibacterial Activity via Morphology Change of AgVO : Theoretical and Experimental Insights. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 11472-11481	9.5	46
83	A 3D platform for the morphology modulation of materials: first principles calculations on the thermodynamic stability and surface structure of metal oxides: Co_3O_4 , Fe_2O_3 , and In_2O_3 . <i>Modelling and Simulation in Materials Science and Engineering</i> , 2016 , 24, 025007	2	46
82	Surfactant-Mediated Morphology and Photocatalytic Activity of Ag_2WO_4 Material. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 8667-8679	3.8	45
81	First-Principles Study of Pressure-Induced Phase Transitions and Electronic Properties of Ag_2MoO_4 . <i>Journal of Physical Chemistry C</i> , 2014 , 118, 3724-3732	3.8	42
80	A Combined Experimental and Theoretical Study on the Formation of Ag Filaments on Ag_2MoO_4 Induced by Electron Irradiation. <i>Particle and Particle Systems Characterization</i> , 2015 , 32, 646-651	3.1	41
79	A theoretical study on the photoluminescence of SrTiO_3 . <i>Chemical Physics Letters</i> , 2010 , 493, 141-146	2.5	41
78	Insight into the Effects of Fe Addition on the Local Structure and Electronic Properties of SrTiO_3 . <i>Journal of Physical Chemistry C</i> , 2014 , 118, 4930-4940	3.8	40
77	Characterization of the TiSiO_4 structure and its pressure-induced phase transformations: Density functional theory study. <i>Physical Review B</i> , 2009 , 80,	3.3	40
76	Synthesis and morphological transformation of BaWO_4 crystals: Experimental and theoretical insights. <i>Ceramics International</i> , 2016 , 42, 10913-10921	5.1	40
75	Synthesis, antifungal evaluation and optical properties of silver molybdate microcrystals in different solvents: a combined experimental and theoretical study. <i>Dalton Transactions</i> , 2016 , 45, 10736-10743	4.3	38
74	Migration of the subsurface C impurity in Pd(111). <i>Physical Review B</i> , 2005 , 71,	3.3	38
73	Quantum-mechanical simulation of MgAl_2O_4 under high pressure. <i>Physical Review B</i> , 2002 , 66,	3.3	37
72	An Experimental and Computational Study of AgVO_3 : Optical Properties and Formation of Ag Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 12254-12264	3.8	37
71	Photoluminescent properties of ZrO_2 : Tm^{3+} , Tb^{3+} , Eu^{3+} powders A combined experimental and theoretical study. <i>Journal of Alloys and Compounds</i> , 2017 , 695, 3094-3103	5.7	36
70	CaSO_4 and its pressure-induced phase transitions. A density functional theory study. <i>Inorganic Chemistry</i> , 2012 , 51, 1751-9	5.1	36

69	Experimental and theoretical investigation of ThGeO ₄ at high pressure. <i>Physical Review B</i> , 2009 , 80,	3.3	35
68	An experimental and theoretical investigation on the optical and photocatalytic properties of ZnS nanoparticles. <i>Journal of Physics and Chemistry of Solids</i> , 2017 , 103, 179-189	3.9	33
67	Formation of Ag Nanoparticles on Ag ₂ WO ₄ through Electron Beam Irradiation: A Synergetic Computational and Experimental Study. <i>Inorganic Chemistry</i> , 2016 , 55, 8661-71	5.1	33
66	Experimental and Theoretical Study of Bi ₂ O ₂ Se Under Compression. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 8853-8867	3.8	32
65	In situ Transmission Electron Microscopy observation of Ag nanocrystal evolution by surfactant free electron-driven synthesis. <i>Scientific Reports</i> , 2016 , 6, 21498	4.9	32
64	A DFT Study of Structural and Electronic Properties of ZnS Polymorphs and its Pressure-Induced Phase Transitions. <i>Journal of the American Ceramic Society</i> , 2014 , 97, 4011-4018	3.8	31
63	Experimental and theoretical study to explain the morphology of CaMoO ₄ crystals. <i>Journal of Physics and Chemistry of Solids</i> , 2018 , 114, 141-152	3.9	31
62	Theoretical approach for determining the relation between the morphology and surface magnetism of Co ₃ O ₄ . <i>Journal of Magnetism and Magnetic Materials</i> , 2018 , 453, 262-267	2.8	30
61	A Theoretical Study on the Pressure-Induced Phase Transitions in the Inverse Spinel Structure Zn ₂ SnO ₄ . <i>Journal of Physical Chemistry C</i> , 2011 , 115, 7740-7746	3.8	28
60	Mechanistic Insights into the Reaction between VO ₂₊ and Propene Based on a DFT Study. <i>Organometallics</i> , 2006 , 25, 1643-1653	3.8	28
59	In situ growth of Ag nanoparticles on Ag ₂ WO ₄ under electron irradiation: probing the physical principles. <i>Nanotechnology</i> , 2016 , 27, 225703	3.4	28
58	Understanding the White-Emitting CaMoO ₄ Co-Doped Eu ³⁺ , Tb ³⁺ , and Tm ³⁺ Phosphor through Experiment and Computation. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 18536-18550	3.8	27
57	Structural study of Bi ₂ O ₃ under pressure. <i>Journal of Physics Condensed Matter</i> , 2013 , 25, 475402	1.8	27
56	Structural and Electronic Effects of Incorporating Mn in TiO ₂ Films Grown by Sputtering: Anatase versus Rutile. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 8753-8762	3.8	27
55	Theoretical and Experimental Insight on Ag ₂ CrO ₄ Microcrystals: Synthesis, Characterization, and Photoluminescence Properties. <i>Inorganic Chemistry</i> , 2016 , 55, 8961-70	5.1	27
54	Structure, morphology and photoluminescence emissions of ZnMoO ₄ : RE 3+=Tb ³⁺ - Tm ³⁺ - X Eu ³⁺ (x= 1, 1.5, 2, 2.5 and 3 mol%) particles obtained by the sonochemical method. <i>Journal of Alloys and Compounds</i> , 2018 , 750, 55-70	5.7	26
53	A theoretical study on the electronic structure of Au-XO(0,-1,+1) (X=C, N, and O) complexes: effect of an external electric field. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 13255-63	2.8	25
52	DFT study of the water-assisted tautomerization process between hydrated oxide, MO(H ₂ O) ⁺ , and dihydroxide, M(OH) ₂ ⁺ , cations (M=V, Nb and Ta). <i>Chemical Physics Letters</i> , 2004 , 384, 56-62	2.5	24

51	A Theoretical Study on the Gas Phase Reactions of the Anions NbO ₃ ⁻ , NbO ₅ ⁻ , and NbO ₂ (OH) ₂ ⁻ with H ₂ O and O ₂ . <i>Journal of Physical Chemistry A</i> , 2004 , 108, 10850-10860	2.8	24
50	Unveiling the role of AgMoO microcrystals to the improvement of antibacterial activity. <i>Materials Science and Engineering C</i> , 2020 , 111, 110765	8.3	23
49	Intercalation processes and diffusion paths of lithium ions in spinel-type structured Li _{1+x} Ti ₂ O ₄ : Density functional theory study. <i>Physical Review B</i> , 2008 , 77,	3.3	22
48	Understanding the formation and growth of Ag nanoparticles on silver chromate induced by electron irradiation in electron microscope: A combined experimental and theoretical study. <i>Journal of Solid State Chemistry</i> , 2016 , 239, 220-227	3.3	21
47	Pressure-induced phase transitions in AgClO ₄ . <i>Physical Review B</i> , 2011 , 84,	3.3	20
46	First-Principles Study on Polymorphs of AgVO ₃ : Assessing to Structural Stabilities and Pressure-Induced Transitions. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 27624-27642	3.8	19
45	Electronic structure and magnetic properties of FeWO ₄ nanocrystals synthesized by the microwave-hydrothermal method. <i>Materials Characterization</i> , 2012 , 73, 124-129	3.9	19
44	Unraveling the Mechanisms of the Selective Oxidation of Methanol to Formaldehyde in Vanadia Supported on Titania Catalyst. <i>Journal of Physical Chemistry C</i> , 2010 , 114, 6039-6046	3.8	19
43	A joint experimental and theoretical study on the electronic structure and photoluminescence properties of Al ₂ (WO ₄) ₃ powders. <i>Journal of Molecular Structure</i> , 2015 , 1081, 381-388	3.4	18
42	Synthesis and characterization of metastable Ag ₂ WO ₄ : an experimental and theoretical approach. <i>Dalton Transactions</i> , 2016 , 45, 1185-91	4.3	18
41	Uncovering the metastable Ag ₂ WO ₄ phase: a joint experimental and theoretical study. <i>RSC Advances</i> , 2017 , 7, 5610-5620	3.7	18
40	Synthesis, optical and ferroelectric properties of PZT thin films: experimental and theoretical investigation. <i>Journal of Materials Chemistry</i> , 2012 , 22, 6587		18
39	Formation of Ag nanoparticles under electron beam irradiation: Atomistic origins from first-principles calculations. <i>International Journal of Quantum Chemistry</i> , 2018 , 118, e25551	2.1	18
38	Experimental and theoretical study of the energetic, morphological, and photoluminescence properties of CaZrO ₃ :Eu ³⁺ . <i>CrystEngComm</i> , 2018 , 20, 5519-5530	3.3	17
37	A DFT study of methanol dissociation on isolated vanadate groups. <i>Catalysis Today</i> , 2008 , 139, 214-220	5.3	16
36	High-pressure behaviour of selenium-based spinels and related structures: an experimental and theoretical study. <i>Journal of Physics Condensed Matter</i> , 2004 , 16, 53-63	1.8	16
35	Effects of chemical substitution on the structural and optical properties of Ag ₂ -2xNixWO ₄ (0 ≤ x ≤ 0.08) solid solutions. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 21966-75	3.6	16
34	On the morphology of BaMoO ₄ crystals: A theoretical and experimental approach. <i>Crystal Research and Technology</i> , 2016 , 51, 634-644	1.3	16

33	Geometry, electronic structure, morphology, and photoluminescence emissions of BaW _{1-x} Mo _x O ₄ ($x = 0, 0.25, 0.50, 0.75$, and 1) solid solutions: Theory and experiment in concert. <i>Applied Surface Science</i> , 2019 , 463, 907-917	6.7	15
32	Joint Theoretical and Experimental Study on the La Doping Process in InO: Phase Transition and Electrocatalytic Activity. <i>Inorganic Chemistry</i> , 2019 , 58, 11738-11750	5.1	15
31	Quantum mechanical modeling of excited electronic states and their relationship to cathodoluminescence of BaZrO ₃ . <i>Journal of Applied Physics</i> , 2013 , 114, 043714	2.5	15
30	Mechanism of photoluminescence in intrinsically disordered CaZrO ₃ crystals: First principles modeling of the excited electronic states. <i>Journal of Alloys and Compounds</i> , 2017 , 722, 981-995	5.7	15
29	Theoretical study on the reaction mechanism of VO ₂₊ with propyne in gas phase. <i>Journal of Physical Chemistry A</i> , 2008 , 112, 1808-18	2.8	15
28	Computational Chemistry Meets Experiments for Explaining the Geometry, Electronic Structure, and Optical Properties of CaVO. <i>Inorganic Chemistry</i> , 2018 , 57, 15489-15499	5.1	15
27	Structural and Electronic Properties of Lithiated SnO ₂ . A Periodic DFT Study. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 16127-16137	3.8	14
26	B and BAgVO ₃ polymorphs as photoluminescent materials: An example of temperature-driven synthesis. <i>Ceramics International</i> , 2018 , 44, 5939-5944	5.1	13
25	Disclosing the electronic structure and optical properties of Ag ₄ V ₂ O ₇ crystals: experimental and theoretical insights. <i>CrystEngComm</i> , 2016 , 18, 6483-6491	3.3	13
24	Density functional theory study of the oxidation of methanol to formaldehyde on a hydrated vanadia cluster. <i>Journal of Computational Chemistry</i> , 2010 , 31, 2493-501	3.5	11
23	Polymorphs of ZnV ₂ O ₆ under Pressure: A First-Principle Investigation. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 3239-3253	3.8	11
22	In Situ Growth of Bi Nanoparticles on NaBiO ₃ , B and BBi ₂ O ₃ Surfaces: Electron Irradiation and Theoretical Insights. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 5023-5030	3.8	10
21	First principle investigation of the exposed surfaces and morphology of BNiMoO ₄ . <i>Journal of Applied Physics</i> , 2019 , 126, 235301	2.5	10
20	Composition Dependence of the Energy Barrier for Lithium Diffusion in Amorphous WO ₃ . <i>Electrochemical and Solid-State Letters</i> , 2005 , 8, J21		9
19	Prediction of dopant atom distribution on nanocrystals using thermodynamic arguments. <i>Physical Chemistry Chemical Physics</i> , 2014 , 16, 1089-94	3.6	8
18	Selective Synthesis of B and BAgWO Polymorphs: Promising Platforms for Photocatalytic and Antibacterial Materials. <i>Inorganic Chemistry</i> , 2021 , 60, 1062-1079	5.1	8
17	Structure, electronic properties, morphology evolution, and photocatalytic activity in PbMoO and PbCaSrMoO (= 0.1, 0.2, 0.3, 0.4 and 0.5) solid solutions. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 25876-25891	3.6	8
16	Modulating the properties of multifunctional semiconductors by means of morphology: Theory meets experiments. <i>Computational Materials Science</i> , 2021 , 188, 110217	3.2	8

LIST OF PUBLICATIONS

15	Bonding and compressibility in molecular and polymeric phases of solid CO ₂ . <i>Journal of Physics Condensed Matter</i> , 2004 , 16, S1263-S1270	1.8	7
14	Efficient Ni and Fe doping process in ZnO with enhanced photocatalytic activity: A theoretical and experimental investigation. <i>Materials Research Bulletin</i> , 2022 , 111849	5.1	6
13	Bonding changes across the Etristobalite- α -tishovite transition path in silica. <i>High Pressure Research</i> , 2009 , 29, 93-96	1.6	5
12	DFT study on the water-assisted mechanism for the reaction between VO ⁺ and NH ₃ to yield VNH ⁺ and H ₂ O. <i>Chemical Physics Letters</i> , 2006 , 427, 265-270	2.5	5
11	Synthesis of Cuboctahedral CeO ₂ Nanoclusters and Their Assembly into Cuboid Nanoparticles by Oriented Attachment. <i>ChemNanoMat</i> , 2017 , 3, 228-232	3.5	4
10	Identifying and explaining vibrational modes of sanbornite (low-BaSiO) and BaSiO: A joint experimental and theoretical study. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021 , 248, 119130	4.4	3
9	Density-functional study of pressure-induced phase transitions and electronic properties of ZnVO ₄ . <i>RSC Advances</i> , 2021 , 11, 10401-10415	3.7	3
8	In situ Formation of Metal Nanoparticles through Electron Beam Irradiation: Modeling Real Materials from First-Principles Calculations. <i>Journal of Material Science & Engineering</i> , 2018 , 07,	0.7	3
7	Bridging Structure and Real-Space Topology: Understanding Complex Molecules and Solid-State Materials 2017 , 427-454		2
6	Stability of MgAl ₂ O ₄ Under High-Pressure Conditions. <i>High Pressure Research</i> , 2002 , 22, 447-450	1.6	2
5	Quantum Chemical Topology Approach for Dissecting Chemical Structure and Reactivity. <i>Challenges and Advances in Computational Chemistry and Physics</i> , 2016 , 257-294	0.7	2
4	Towards a white-emitting phosphor Ca ₁₀ V ₆ O ₂₅ based material. <i>Journal of Luminescence</i> , 2020 , 220, 116990	3.8	2
3	Ag ₂ WO ₄ under microwave, electron beam and femtosecond laser irradiations: Unveiling the relationship between morphology and photoluminescence emissions. <i>Journal of Alloys and Compounds</i> , 2022 , 903, 163840	5.7	1
2	Integrated experimental and theoretical study on the phase transition and photoluminescent properties of ZrO ₂ :xTb ³⁺ (x=1, 2, 4 and 8 mol %). <i>Materials Research Bulletin</i> , 2022 , 145, 111532	5.1	0
1	Chemical Bonding under Pressure 2015 , 131-157		