Francisco Colmenero Ruiz

List of Publications by Year in Descending Order

41 papers	997 citations	16 h-index	31 g-index
44 ext. papers	1,155 ext. citations	3.4 avg, IF	5.42 L-index

#	Paper	IF	Citations
41	Fluorine-substituted cyclobutenes in the solid state: Crystal structures, vibrational spectra and mechanical and thermodynamic properties. *Journal of Physics and Chemistry of Solids*, **2022**, 160, 110337	3.9	0
40	Mechanical anomalies in mercury oxalate and the deformation of the mercury cube coordination environment under pressure. *Applied Physics A: Materials Science and Processing*, **2021**, 127, 1	2.6	0
39	Negative area compressibility in silver oxalate. *Journal of Materials Science*, **2021**, 56, 269-277	4.3	3
38	Negative linear compressibility in nanoporous metal-organic frameworks rationalized by the empty channel structural mechanism. *Physical Chemistry Chemical Physics*, **2021**, 23, 8508-8524	3.6	2
37	The magnesium uranyl tricarbonate octadecahydrate mineral, bayleyite: Periodic DFT study of its crystal structure, hydrogen bonding, mechanical properties and infrared spectrum. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, **2020**, 234, 118216	4.4	5
36	Uranosphaerite: Crystal structure, hydrogen bonding, mechanics, infrared and Raman spectroscopy and thermodynamics. *Journal of Physics and Chemistry of Solids*, **2020**, 141, 109400	3.9	6
35	The crystal structures and mechanical properties of the uranyl carbonate minerals roubaultite, fontanite, sharpite, widenmannite, grimselite and Ejkaite. *Inorganic Chemistry Frontiers*, **2020**, 7, 4197-4221	6.8	4
34	Crystal Structure, Infrared Spectrum and Elastic Anomalies in Tuperssuatsiaite. *Scientific Reports*, **2020**, 10, 7510	4.9	7
33	Organic acids under pressure: elastic properties, negative mechanical phenomena and pressure induced phase transitions in the lactic, maleic, succinic and citric acids. *Materials Advances*, **2020**, 1, 1399-1426	3.3	9
32	Thermodynamic properties of the uranyl carbonate minerals roubaultite, fontanite, widenmannite, grimselite, Ejkaite and bayleyite. *Inorganic Chemistry Frontiers*, **2020**, 7, 4160-4179	6.8	5
31	Full crystal structure, hydrogen bonding and spectroscopic, mechanical and thermodynamic properties of mineral uranopilite.. *RSC Advances*, **2020**, 10, 31947-31960	3.7	6
30	Extreme negative mechanical phenomena in the zinc and cadmium anhydrous metal oxalates and lead oxalate dihydrate. *Journal of Materials Science*, **2020**, 55, 218-236	4.3	13
29	Mechanical properties of anhydrous oxalic acid and oxalic acid dihydrate. *Physical Chemistry Chemical Physics*, **2019**, 21, 2673-2690	3.6	31
28	Negative linear compressibility in uranyl squarate monohydrate. *Journal of Physics Condensed Matter*, **2019**, 31, 175701	1.8	8
27	Crystal structure, hydrogen bonding, mechanical properties and Raman spectrum of the lead uranyl silicate monohydrate mineral kasolite.. *RSC Advances*, **2019**, 9, 15323-15334	3.7	17
26	Silver Oxalate: Mechanical Properties and Extreme Negative Mechanical Phenomena. *Advanced Theory and Simulations*, **2019**, 2, 1900040	3.5	13
25	Thermodynamic, Raman Spectroscopic, and UV-Visible Optical Characterization of the Deltic, Squaric, and Croconic Cyclic Oxocarbon Acids. *Journal of Physical Chemistry A*, **2019**, 123, 4241-4261	2.8	9

24	Periodic density functional theory study of the Raman spectrum of the hydrated uranyl oxyhydroxide mineral becquerelite. *Theoretical Chemistry Accounts*, **2019**, 138, 1	1.9	9
23	Addendum: anomalous mechanical behavior of the deltic, squaric and croconic cyclic oxocarbon acids. *Materials Research Express*, **2019**, 6, 069401	1.7	6
22	Negative area compressibility in oxalic acid dihydrate. *Materials Letters*, **2019**, 245, 25-28	3.3	15
21	The layered uranyl silicate mineral uranophane-□crystal structure, mechanical properties, Raman spectrum and comparison with the □polymorph. *Dalton Transactions*, **2019**, 48, 16722-16736	4.3	14
20	Structural, mechanical, spectroscopic and thermodynamic characterization of the copper-uranyl tetrahydroxide mineral vandenbrandeite.. *RSC Advances*, **2019**, 9, 40708-40726	3.7	7
19	Anomalous mechanical behavior of the deltic, squaric and croconic cyclic oxocarbon acids. *Materials Research Express*, **2019**, 6, 045610	1.7	18
18	Periodic DFT Study of the Thermodynamic Properties and Stability of Schoepite and Metaschoepite Mineral Phases. *ACS Earth and Space Chemistry*, **2019**, 3, 17-28	3.2	20
17	Structural, spectroscopic, and thermodynamic characterization of ammonium oxalate monohydrate mineral using theoretical solid-state methods. *Journal of Physics and Chemistry of Solids*, **2019**, 125, 31-42	3.9	13
16	Temperature-Dependent Gibbs Free Energies of Reaction of Uranyl-Containing Materials Based on Density Functional Theory. *Journal of Physical Chemistry C*, **2018**, 122, 5268-5279	3.8	26
15	Thermodynamic Properties of Uranyl-Containing Materials Based on Density Functional Theory. *Journal of Physical Chemistry C*, **2018**, 122, 5254-5267	3.8	26
14	Study of the structural, vibrational and thermodynamic properties of natroxalate mineral using density functional theory. *Journal of Solid State Chemistry*, **2018**, 263, 131-140	3.3	12
13	Periodic Density Functional Theory Study of the Structure, Raman Spectrum, and Mechanical Properties of Schoepite Mineral. *Inorganic Chemistry*, **2018**, 57, 4470-4481	5.1	39
12	Becquerelite mineral phase: crystal structure and thermodynamic and mechanical stability by using periodic DFT.. *RSC Advances*, **2018**, 8, 24599-24616	3.7	28
11	Structural, mechanical and Raman spectroscopic characterization of the layered uranyl silicate mineral, uranophane-□by density functional theory methods. *Clay Minerals*, **2018**, 53, 377-392	1.3	16
10	Revealing Rutherfordine Mineral as an Auxetic Material. *Applied Sciences (Switzerland)*, **2018**, 8, 2281	2.6	14
9	Thermodynamic and Mechanical Properties of the Rutherfordine Mineral Based on Density Functional Theory. *Journal of Physical Chemistry C*, **2017**, 121, 5994-6001	3.8	36
8	Structural, mechanical and vibrational study of uranyl silicate mineral soddyite by DFT calculations. *Journal of Solid State Chemistry*, **2017**, 253, 249-257	3.3	34
7	Density Functional Theory Study of the Thermodynamic and Raman Vibrational Properties of □UO3 Polymorph. *Journal of Physical Chemistry C*, **2017**, 121, 14507-14516	3.8	35

6	Study of the thermal stability of studtite by in situ Raman spectroscopy and DFT calculations. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy*, **2017**, 174, 245-253	4.4	34
5	Spectroscopic Raman characterization of rutherfordine: a combined DFT and experimental study. *Physical Chemistry Chemical Physics*, **2016**, 18, 16575-84	3.6	36
4	Graphical method for operating in second quantization. *Physical Review A*, **1994**, 49, 4217-4220	2.6	
3	Self-consistent approximate solution of the second-order contracted Schrödinger equation. *International Journal of Quantum Chemistry*, **1994**, 51, 369-388	2.1	108
2	Approximating q-order reduced density matrices in terms of the lower-order ones. II. Applications. *Physical Review A*, **1993**, 47, 979-985	2.6	181
1	Approximating q-order reduced density matrices in terms of the lower-order ones. I. General relations. *Physical Review A*, **1993**, 47, 971-978	2.6	132