Jean-Yves Raty

List of Publications by Year
in descending order

26	1,211	623734	552781
papers	citations	14 h-index	26 g-index

28	28	28	1137
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Incipient Metals: Functional Materials with a Unique Bonding Mechanism. Advanced Materials, 2018, 30, e1803777.	21.0	255
2	A Quantumâ€Mechanical Map for Bonding and Properties in Solids. Advanced Materials, 2019, 31, e1806280.	21.0	206
3	Phase-change materials for non-volatile memory devices: from technological challenges to materials science issues. Semiconductor Science and Technology, 2018, 33, 013002.	2.0	180
4	Understanding the Structure and Properties of Sesquiâ€Chalcogenides (i.e.,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 627 Td (V<sub>2</su	21.0	98
5	Toward ultimate nonvolatile resistive memories: The mechanism behind ovonic threshold switching revealed. Science Advances, 2020, 6, eaay2830.	10.3	89
6	Metavalent Bonding in Crystalline Solids: How Does It Collapse?. Advanced Materials, 2021, 33, e2102356.	21.0	65
7	Discovering Electronâ€Transferâ€Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where) Tj ETQq1 1 0.784314 rgBT /O	21.0	56
8	The interplay between Peierls distortions and metavalent bonding in IVâ€“VI compounds: comparing GeTe with related monochalcogenides. Journal Physics D: Applied Physics, 2020, 53, 234002.	2.8	43
9	Amorphous structure and electronic properties of the Ge1Sb2Te4 phase change material. Solid State Sciences, 2010, 12, 193-198.	3.2	36
10	Vibrational properties and stabilization mechanism of the amorphous phase of doped GeTe. Physical Review B, 2013, 88, .	3.2	24
11	Structural and vibrational study of the negative thermal expansion in liquid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>As</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:m Physical Review B, 2010, 82, .	3.2	20
12	How to Identify Lone Pairs, Van der Waals Gaps, and Metavalent Bonding Using Charge and Pair Density Methods: From Elemental Chalcogens to Lead Chalcogenides and Phaseâ€Change Materials. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000534.	2.4	19
13	Ab initio density functional theory study of the electronic, dynamic, and thermoelectric properties of the crystalline pseudobinary chalcogenide <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mtext>(GeTe)</mml:mtext></mml:mrow><mml:mfow><m width="0.. Physical Review B, 2018, 97, .	3.2	18
14	Laser Generation of Subâ€Micrometer Wrinkles in a Chalcogenide Glass Film as Physical Unclonable Functions. Advanced Materials, 2020, 32, e2003032.	21.0	18
15	Ovonic Threshold Switching in Seâ€Rich Ge_xSe_{1â^'x} Glasses from an Atomistic Point of View: The Crucial Role of the Metavalent Bonding Mechanism. Physica Status Solidi - Rapid Research Letters, 2020, 14, 1900581.	2.4	14
16	Aging in Phase Change Materials: Getting Insight from Simulation. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1800590.	2.4	11
17	Universal amorphous-amorphous transition in GexSe100â^'x glasses under pressure. Scientific Reports, 2016, 6, 27317.	3.3	9
18	Phase-change materials and rigidity. MRS Bulletin, 2017, 42, 45-49.	3.5	9

#	Article	IF	Citations
19	Local structure of [(GeTe)₂/(Sb₂Te₃)_m]_n super-lattices by x-ray absorption spectroscopy. Journal Physics D: Applied Physics, 2020, 53, 404002.	2.8	9
20	Opto-electronic properties and solar cell efficiency modelling of Cu₂ZnXS₄ (X = Sn,â€‰Ge,â€‰Si) kesterites. JPhys Energy, 2021, 3, 035005.	5.3	9
21	Subâ€Picosecond Nonâ€Equilibrium States in the Amorphous Phase of GeTe Phaseâ€Change Material Thin Films. Advanced Materials, 2021, 33, e2102721.	21.0	8
22	Relevance of Ge incorporation to control the physical behaviour of point defects in kesterite. Journal of Materials Chemistry A, 2022, 10, 4355-4365.	10.3	7
23	Amorphous Phase Change Materials: Structure, Stability and Relation with Their Crystalline Phase. Springer Series in Materials Science, 2015, , 485-509.	0.6	3
24	Ovonic Threshold Switching in Seâ€Rich Ge_xSe_{1â^’x} Glasses from an Atomistic Point of View: The Crucial Role of the Metavalent Bonding Mechanism. Physica Status Solidi - Rapid Research Letters, 2020, 14, 2070024.	2.4	3
25	Chalcogenide Films: Laser Generation of Subâ€Micrometer Wrinkles in a Chalcogenide Glass Film as Physical Unclonable Functions (Adv. Mater. 38/2020). Advanced Materials, 2020, 32, 2070287.	21.0	1
26	Lead Chalcogenides: Discovering Electronâ€Transferâ€Driven Changes in Chemical Bonding in Lead Chalcogenides (PbX, where X = Te, Se, S, O) (Adv. Mater. 49/2020). Advanced Materials, 2020, 32, 2070370.	21.0	1