Valentina Giordano

List of Publications by Year
in descending order

55 papers	1,942 citations	257450 24 h-index	243625 44 g-index

57 all docs	57 docs citations	57 times ranked	1882 citing authors

#	Article	IF	Citations
1	Atomic-Scale Relaxation Dynamics and Aging in a Metallic Glass Probed by X-Ray Photon Correlation Spectroscopy. Physical Review Letters, 2012, 109, 165701.	7.8	217
2	Breakdown of the Debye approximation for the acoustic modes with nanometric wavelengths in glasses. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 3659-3663.	7.1	148
3	Sound Attenuation at Terahertz Frequencies and the Boson Peak of Vitreous Silica. Physical Review Letters, 2010, 104, 195501.	7.8	135
4	Localization of Propagative Phonons in a Perfectly Crystalline Solid. Physical Review Letters, 2014, 113, 025506.	7.8	104
5	Fingerprints of order and disorder on the high-frequency dynamics of liquids. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 21985-21989.	7.1	103
6	Direct measurement of individual phonon lifetimes in the clathrate compound Ba7.81Ge40.67Au5.33. Nature Communications, 2017, 8, 491.	12.8	89
7	Unveiling the structural arrangements responsible for the atomic dynamics in metallic glasses during physical aging. Nature Communications, 2016, 7, 10344.	12.8	87
8	Role of Non-Hydrogen-Bonded Molecules in the Oxygen K-Edge Spectrum of Ice. Journal of Physical Chemistry B, 2010, 114, 3804-3808.	2.6	68
9	Inelastic x-ray scattering study of liquid Ga: Implications for the short-range order. Physical Review B, 2011, 84, .	3.2	66
10	Melting curve and fluid equation of state of carbon dioxide at high pressure and high temperature. Journal of Chemical Physics, 2006, 125, 054504.	3.0	65
11	Molecular carbon dioxide at high pressure and high temperature. Europhysics Letters, 2007, 77, 46002.	2.0	58
12	Evidence of fivefold-coordinated Ge atoms in amorphous GeO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>under pressure using inelastic x-ray scattering. Physical Review B, 2012, 85, .	3.2	53
13	Structure of Carbon Dioxide Phase IV: Breakdown of the Intermediate Bonding State Scenario. Physical Review Letters, 2009, 103, 185701.	7.8	52
14	Elastic anomalies at terahertz frequencies and excess density of vibrational states in silica glass. Physical Review B, 2011, 83, .	3.2	47
15	Anti-Aging in Ultrastable Metallic Glasses. Physical Review Letters, 2018, 120, 135504.	7.8	45
16	Acoustic excitations in glassy sorbitol and their relation with the fragility and the boson peak. Journal of Chemical Physics, 2012, 137, 214502.	3.0	43
17	Linear Carbon Dioxide in the High-Pressure High-Temperature Crystalline Phase IV. Physical Review Letters, 2004, 93, 205503.	7.8	40
18	Anharmonic Damping of Terahertz Acoustic Waves in a Network Glass and Its Effect on the Density of Vibrational States. Physical Review Letters, 2014, 112, 125502.	7.8	36

#	Article	IF	Citations
19	Thermal conductivity and terahertz vibrational dynamics of vitreous silica. Physical Review B, 2008, 77, .	3.2	35
20	Communication: High-frequency acoustic excitations and boson peak in glasses: A study of their temperature dependence. Journal of Chemical Physics, 2010, 133, 041101.	3.0	34
21	Propagative and diffusive regimes of acoustic damping in bulk amorphous material. Physical Review E, 2018, 98, 023005.	2.1	29
22	Multichannel detectorâ€“collimator for powder diffraction measurements at energy scanning x-ray absorption spectroscopy synchrotron radiation beamlines for high-pressure and high-temperature applications. Review of Scientific Instruments, 2003, 74, 2654-2663.	1.3	28
23	Glassy properties and viscous slowing down: An analysis of the correlation between nonergodicity factor and fragility. Journal of Chemical Physics, 2008, 129, 194513.	3.0	28
24	Nonergodicity Factor, Fragility, and Elastic Properties of Polymeric Glassy Sulfur. Journal of Physical Chemistry B, 2011, 115, 14052-14063.	2.6	25
25	Understanding lattice thermal conductivity in thermoelectric clathrates: A density functional theory study on binary Si-based type-I clathrates. Physical Review B, 2018, 97, .	3.2	25
26	Equation of state and anharmonicity of carbon dioxide phase I up to 12 GPa and 800 K. Journal of Chemical Physics, 2010, 133, 144501.	3.0	24
27	Nanocrystalline inclusions as a low-pass filter for thermal transport ina-Si. Physical Review B, 2015, 92, .	3.2	20
28	Reduced phase space of heat-carrying acoustic phonons in single-crystalline InTe. Physical Review Research, 2020, 2, .	3.6	20
29	Pressure-induced electron topological transitions in Ba-doped Si clathrate. Physical Review B, 2011, 84, .	3.2	17
30	Structural and dynamical properties of Mg65Cu25Y10 metallic glasses studied by in situ high energy X-ray diffraction and time resolved X-ray photon correlation spectroscopy. Journal of Alloys and Compounds, 2014, 615, S45-S50.	5.5	17
31	Relaxation dynamics and aging in structural glasses. , 2013, , .		16
32	Thermal transport properties in amorphous/nanocrystalline metallic composites: A microscopic insight. Acta Materialia, 2017, 136, 425-435.	7.9	16
33	Enhancement and anticipation of the Ioffeâ€“Regel crossover in amorphous/nanocrystalline composites. Nanoscale, 2019, 11, 21502-21512.	5.6	16
34	Prediction and Synthesis of a Non-Zintl Silicon Clathrate. Chemistry of Materials, 2016, 28, 3711-3717.	6.7	15
35	Enhanced thermal conductivity in percolating nanocomposites: a molecular dynamics investigation. Nanoscale, 2018, 10, 21732-21741.	5.6	11
36	Impact of structural complexity and disorder on lattice dynamics and thermal conductivity in the o-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Al</mml:mi><mml:mn>13</mml:mn></mml: phase. Physical Review B, 2020, 102, .	3.2	11

#	Article	IF	Citations
37	High frequency acoustic attenuation of vitreous silica: New insight from inelastic x-ray scattering. Journal of Non-Crystalline Solids, 2011, 357, 538-541.	3.1	10
38	Thermal Transport in a 2D Nanophononic Solid: Role of bi-Phasic Materials Properties on Acoustic Attenuation and Thermal Diffusivity. Nanomaterials, 2019, 9, 1471.	4.1	10
39	Universal acoustic dispersion in liquid alkali metals. Physical Review B, 2009, 79, .	3.2	9
40	On the nontrivial wave-vector dependence of the elastic modulus of glasses. Physical Review B, 2016, 93, .	3.2	9
41	Reverse Roughening Transition in Carbon Dioxide. Physical Review Letters, 2007, 99, 165701.	7.8	8
42	Lattice Expansion and Ge Solubility in the Ag1-?Ge? Terminal Solid Solution. Physica Status Solidi (B): Basic Research, 2002, 234, 496-505.	1.5	6
43	Phonon spectroscopy at high pressure by inelastic X-ray scattering. Journal of Synchrotron Radiation, 2009, 16, 707-713.	2.4	6
44	Elastic anomalies in glasses: Elastic string theory understanding of the cases of glycerol and silica. Physical Review B, 2020, 101, .	3.2	6
45	Innovative Nanocomposites for Low Power Phaseâ€Change Memory: GeTe/C Multilayers. Physica Status Solidi - Rapid Research Letters, 2022, 16, .	2.4	6
46	High frequency dynamics in liquid Cs at high pressure. Journal of Chemical Physics, 2009, 131, 014501.	3.0	5
47	Infrared study of high-pressure molecular phases of carbon dioxide. Low Temperature Physics, 2006, 32, 1067-1071.	0.6	4
48	Continuum constitutive laws to describe acoustic attenuation in glasses. Physical Review E, 2020, 102, 033003.	2.1	4
49	Sound velocity and refractive index of pure N2 fluid and of equimolar N2â€“CO2 fluid mixture up to 15 GPa. Journal of Chemical Physics, 2020, 153, 114503.	3.0	4
50	Pressure effect on the electronic structure of La<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>5</mml:mn><mml:mo>/</mml:mo><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>Sr<mml:m xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mrow><mml:mn>1</mml:mn><mml:mo>/</mml:mo><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:math>NiO<mm xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline. Physical Review B, 2011, 84, .	3.2	3
51	Impact of temperature and mode polarization on the acoustic phonon range in complex crystalline phases: A case study on intermetallic clathrates. Physical Review Research, 2021, 3, .	3.6	3
52	Crystal-field excitations in NiO under high pressure studied by resonant inelastic x-ray scattering. Journal of Physics Condensed Matter, 2014, 26, 135501.	1.8	2
53	Role of a fractal shape of the inclusions on acoustic attenuation in a nanocomposite. APL Materials, 2021, 9, .	5.1	2
54	Electronic structure of La5/3Sr1/3NiO4 by x-ray emission spectroscopy and resonant inelastic x-ray scattering. Journal of Applied Physics, 2012, 111, 112625.	2.5	1

#	Article	IF	Citations
55	Contribution of the terahertz vibrations to the high-temperature thermal conductivity of vitreous silica. Philosophical Magazine, 2008, 88, 3915-3923.	1.6	0