Antonio Sanna

List of Publications by Year
in descending order

73 papers	3,285 citations	159358 30 h-index	143772 57 g-index
73 all docs	73 docs citations	73 times ranked	2932 citing authors

#	Article	IF	Citations
1	The 2021 room-temperature superconductivity roadmap. Journal of Physics Condensed Matter, 2022, 34, 183002.	0.7	79
2	Y₂O₃:Eu and the MÃ¶ssbauer isomer shift coefficient of Eu compounds from ab-initio simulations. Journal of Physics Condensed Matter, 2022, 34, 075502.	0.7	1
3	Real-space anisotropy of the superconducting gap in the charge-density wave material 2H-NbSe2. Npj Quantum Materials, 2022, 7, .	1.8	11
4	Eliashberg theory with ab-initio Coulomb interactions: a minimal numerical scheme applied to layered superconductors. JPhys Materials, 2022, 5, 024007.	1.8	5
5	Ab initio study of ultrafast demagnetization of elementary ferromagnets by terahertz versus optical pulses. Physical Review B, 2022, 105, .	1.1	5
6	Superconducting Chevrel phase <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">PbMo</mml:mi><mml:mn>6</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>8</mml:mn></mml:msub></mml:math> from first principles. Physical Review B, 2021, 103, .	1.1	8
7	Special issue on novel superconducting and magnetic materials. Journal of Physics Condensed Matter, 2020, 32, 040401.	0.7	0
8	Combining Eliashberg Theory with Density Functional Theory for the Accurate Prediction of Superconducting Transition Temperatures and Gap Functions. Physical Review Letters, 2020, 125, 057001.	2.9	37
9	Ab initio theory of plasmonic superconductivity within the Eliashberg and density-functional formalisms. Physical Review B, 2020, 102, .	1.1	20
10	Density functional theory of magnetic dipolar interactions. Physical Review B, 2020, 101, .	1.1	10
11	A perspective on conventional high-temperature superconductors at high pressure: Methods and materials. Physics Reports, 2020, 856, 1-78.	10.3	304
12	Quantum crystal structure in the 250-kelvin superconducting lanthanum hydride. Nature, 2020, 578, 66-69.	13.7	193
13	Direct evaluation of the isotope effect within the framework of density functional theory for superconductors. Journal of Physics Condensed Matter, 2019, 31, 334001.	0.7	2
14	Density functional theory of superconductivity in doped tungsten oxides. Physical Review Materials, 2019, 3, .	0.9	15
15	Superconductivity in tin selenide under pressure. Physical Review Materials, 2019, 3, .	0.9	10
16	Ab initio Eliashberg Theory: Making Genuine Predictions of Superconducting Features. Journal of the Physical Society of Japan, 2018, 87, 041012.	0.7	72
17	Source-Free Exchange-Correlation Magnetic Fields in Density Functional Theory. Journal of Chemical Theory and Computation, 2018, 14, 1247-1253.	2.3	23
18	Direct observation of a surface resonance state and surface band inversion control in black phosphorus. Physical Review B, 2018, 97, .	1.1	33

#	Article	IF	Citations
19	Effect of exchange-correlation spinâ€“torque on spin dynamics. European Physical Journal B, 2018, 91, 1.	0.6	9
20	Emergent Dirac carriers across a pressure-induced Lifshitz transition in black phosphorus. Physical Review B, 2018, 98, .	1.1	14
21	Superconductivity in hydrogenated carbon nanostructures. European Physical Journal B, 2018, 91, 1.	0.6	10
22	Superconductivity in doped polyethylene at high pressure. European Physical Journal B, 2018, 91, 1.	0.6	8
23	Ab initiostudy of doping effects in the 42214 compounds: A new family of layered iron-based superconductors. Physical Review B, 2017, 95, .	1.1	2
24	Origin of the critical temperature discontinuity in superconducting sulfur under high pressure. Physical Review B, 2017, 95, .	1.1	19
25	Accelerated materials design approaches based on structural classification: application to low enthalpy high pressure phases of SH3 and SeH3. Novel Superconducting Materials, 2017, 3, .	0.8	5
26	Emergence of superconductivity in doped H2O ice at high pressure. Scientific Reports, 2017, 7, 6825.	1.6	23
27	Electronâ€“Phonon Coupling in Two-Dimensional Superconductors: Doped Graphene and Phosphorene. Carbon Nanostructures, 2017, , 31-45.	0.1	5
28	Interplay between structure and superconductivity: Metastable phases of phosphorus under pressure. Physical Review Materials, 2017, 1, .	0.9	48
29	Evolution of electronic structure of few-layer phosphorene from angle-resolved photoemission spectroscopy of black phosphorous. Physical Review B, 2016, 94, .	1.1	44
30	Comment on â€œEstimating Excitonic Effects in the Absorption Spectra of Solids: Problems and Insight from a Guided Iteration Schemeâ€• Physical Review Letters, 2016, 117, 159701.	2.9	6
31	Superconductivity in metastable phases of phosphorus-hydride compounds under high pressure. Physical Review B, 2016, 93, .	1.1	125
32	42214 layered Fe-based superconductors: Anab initiostudy of their structural, magnetic, and electronic properties. Physical Review B, 2016, 93, .	1.1	3
33	Ab initiotheory of iron-based superconductors. Physical Review B, 2016, 94, .	1.1	35
34	The optimal one dimensional periodic table: a modified Pettifor chemical scale from data mining. New Journal of Physics, 2016, 18, 093011.	1.2	50
35	High temperature superconductivity in sulfur and selenium hydrides at high pressure. European Physical Journal B, 2016, 89, 1.	0.6	154
36	First-principles and angle-resolved photoemission study of lithium doped metallic black phosphorous. 2D Materials, 2016, 3, 025031.	2.0	21

#	Article	IF	Citations
37	First-Principles Calculation of the Real-Space Order Parameter and Condensation Energy Density in Phonon-Mediated Superconductors. Physical Review Letters, 2015, 115, 097002.	2.9	26
38	Superconductivity in intercalated group-IV honeycomb structures. Physical Review B, 2015, 91, .	1.1	30
39	Ab initiotheory of superconductivity in a magnetic field. I. Spin density functional theory for superconductors and Eliashberg equations. Physical Review B, 2015, 92, .	1.1	24
40	Ab initiotheory of superconductivity in a magnetic field. II. Numerical solution. Physical Review B, 2015, 92, .	1.1	18
41	Superconducting pairing mediated by spin fluctuations from first principles. Physical Review B, 2014, 90, .	1.1	46
42	How to represent crystal structures for machine learning: Towards fast prediction of electronic properties. Physical Review B, 2014, 89, .	1.1	353
43	Virial theorem and exact properties of density functionals for periodic systems. Physical Review B, 2014, 89, .	1.1	1
44	Normal and superconducting properties of LiFeAs explained in the framework of four-band Eliashberg theory. Physica C: Superconductivity and Its Applications, 2013, 492, 21-24.	0.6	4
45	A phenomenological multiband Eliashberg model for LiFeAs. Journal of Physics Condensed Matter, 2013, 25, 205701.	0.7	9
46	Anisotropic in-plane optical conductivity in detwinned Ba(Fe_{1â^'x}Co_x)₂As₂. New Journal of Physics, 2012, 14, 023020.	1.2	32
47	Phononic self-energy effects and superconductivity in CaC<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>6</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 85, .	1.1	29
48	First-principles study of rare-earth-doped superconducting CaFe<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>As<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>. Physical Review B, 2012, 86, .	1.1	15
49	Enhanced excitonic effects in the energy loss spectra of LiF and Ar at large momentum transfer. New Journal of Physics, 2012, 14, 053052.	1.2	17
50	Bootstrap Approximation for the Exchange-Correlation Kernel of Time-Dependent Density-Functional Theory. Physical Review Letters, 2011, 107, 186401.	2.9	164
51	Exact Conditions in Finite-Temperature Density-Functional Theory. Physical Review Letters, 2011, 107, 163001.	2.9	73
52	Anisotropic exchange interaction between nonmagnetic europium cations in Eu<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>O<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2011, 84, .	1.1	22
53	Theoretical investigation of optical conductivity in Ba(Fe1â^'xCox)2As2. Physical Review B, 2011, 83, .	1.1	18
54	Electron-phonon interaction and superconductivity in metallic molecular hydrogen. I. Electronic and dynamical properties under pressure. Physical Review B, 2010, 81, .	1.1	47

#	Article	IF	Citations
55	Static and dynamical susceptibility ofLaO1â˜xFxFeAs. Physical Review B, 2010, 81, .	1.1	6
56	Structural, vibrational, and quasiparticle properties of the Peierls semiconductorBaBiO3: A hybrid functional and self-consistentGW+vertex-correctionsstudy. Physical Review B, 2010, 81, .	1.1	79
57	Electron-phonon interaction and superconductivity in metallic molecular hydrogen. II. Superconductivity under pressure. Physical Review B, 2010, 81, .	1.1	60
58	Magnetism in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>CeFeAsO</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>, <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>LaFeAsO</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>: Physical Review B, 2009, 80, .	1.1	14
59	Electronic, vibrational, and superconducting properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:mtext>CaBeSi</mml:mtext></mml:mrow></mml:mrow></mml:math>: First-principles calculations. Physical Review B, 2009, 79, .	1.1	32
60	Multiband superconductivity in Pb, H under pressure and CaBeSi fromab initiocalculations. Journal of Physics Condensed Matter, 2009, 21, 164209.	0.7	10
61	The role of Coulomb interaction in the superconducting properties of CaC₆and H under pressure. Superconductor Science and Technology, 2009, 22, 034006.	1.8	32
62	AbÂInitioDescription of High-Temperature Superconductivity in Dense Molecular Hydrogen. Physical Review Letters, 2008, 100, 257001.	2.9	199
63	Evidence for Gap Anisotropy in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CaC</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:math>from Directional Point-Contact Spectroscopy. Physical Review Letters, 2008, 100, 207004.	2.9	46
64	Intraband vs. interband scattering rate effects in neutron irradiated MgB 2. Europhysics Letters, 2007, 77, 57005.	0.7	28
65	Two-band superconductivity in Pb fromab initiocalculations. Physical Review B, 2007, 75, .	1.1	73
66	Anisotropic gap of superconductingCaC6: A first-principles density functional calculation. Physical Review B, 2007, 75, .	1.1	101
67	Superconducting properties of MgB2 from first principles. Physica C: Superconductivity and Its Applications, 2007, 456, 45-53.	0.6	46
68	Electronic and structural properties of Liâ€“Al co-doped MgB2. Physica C: Superconductivity and Its Applications, 2007, 460-462, 566-567.	0.6	0
69	Ab initioprediction of pressure-induced superconductivity in potassium. Physical Review B, 2006, 73, .	1.1	41
70	Superconductivity in Lithium, Potassium, and Aluminum under Extreme Pressure: A First-Principles Study. Physical Review Letters, 2006, 96, 047003.	2.9	159
71	Chemical-pressureâ€“induced modifications on the magnetic and electronic properties of Ba 1 â˜ x Sr x VS 3. Europhysics Letters, 2005, 71, 952-958.	0.7	3
72	Role of electronic correlations on the ground-state properties and on the pressure-induced metal-insulator transition inBaVS3. Physical Review B, 2004, 70, .	1.1	8

#	Article	IF	Citations
73	Chemical Pressure-Induced Ferromagnetism and Stabilization of the Metallic State in Ba1-xSrxVS3. International Journal of Modern Physics B, 2003, 17, 3503-3508.	1.0	11