

# Elbio Dagotto

## List of Publications by Year in descending order

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172  
papers

15,336  
citations

53751

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g-index

173  
all docs

173  
docs citations

173  
times ranked

9137  
citing authors

#	ARTICLE	IF	CITATIONS
1	Colossal magnetoresistant materials: the key role of phase separation. Physics Reports, 2001, 344, 1-153.	10.3	3,346
2	Correlated electrons in high-temperature superconductors. Reviews of Modern Physics, 1994, 66, 763-840.	16.4	2,716
3	Surprises on the Way from One- to Two-Dimensional Quantum Magnets: The Ladder Materials. Science, 1996, 271, 618-623.	6.0	1,506
4	Superconductivity in ladders and coupled planes. Physical Review B, 1992, 45, 5744-5747.	1.1	693
5	Phase Separation in Electronic Models for Manganites. Physical Review Letters, 1998, 80, 845-848.	2.9	486
6	Magnetism and its microscopic origin in iron-based high-temperature superconductors. Nature Physics, 2012, 8, 709-718.	6.5	481
7	Experiments on ladders reveal a complex interplay between a spin-gapped normal state and superconductivity. Reports on Progress in Physics, 1999, 62, 1525-1571.	8.1	372
8	<i>Colloquium</i> : The unexpected properties of alkali metal iron selenide superconductors. Reviews of Modern Physics, 2013, 85, 849-867.	16.4	291
9	Resistivity of Mixed-Phase Manganites. Physical Review Letters, 2001, 86, 135-138.	2.9	241
10	Three orbital model for the iron-based superconductors. Physical Review B, 2010, 81, .	1.1	177
11	Real-time simulations of nonequilibrium transport in the single-impurity Anderson model. Physical Review B, 2009, 79, .	1.1	157
12	When Oxides Meet Face to Face. Science, 2007, 318, 1076-1077.	6.0	144
13	Multiferroic properties of $\text{CaVInO}_7$ . Physical Review B, 2011, 84, .	1.1	142
14	Magnetoelectricity in multiferroics: a theoretical perspective. National Science Review, 2019, 6, 629-641.	4.6	129
15	Ferromagnetic tendency at the surface of CE-type charge-ordered manganites. Physical Review B, 2008, 78, .	1.1	121
16	Properties of a two-orbital model for oxypnictide superconductors: Magnetic order, spin-singlet pairing channel, and its nodal structure. Physical Review B, 2009, 79, .	1.1	111
17	Origin of multiferroic spiral spin order in the $\text{R}_2\text{MnO}_5$ . Physical Review B, 2008, 78, .	1.1	106
18	Theoretical study of half-doped models for manganites: Fragility of CE phase with disorder, two types of colossal magnetoresistance, and charge-ordered states for electron-doped materials. Physical Review B, 2003, 68, .	1.1	105

#	ARTICLE	IF	CITATIONS
19	Local Enhancement of Antiferromagnetic Correlations by Nonmagnetic Impurities. Physical Review Letters, 1997, 78, 3563-3566.	2.9	101
20	Phase Diagram of Electronic Models for Transition Metal Oxides in One Dimension. Physical Review Letters, 1997, 79, 713-716.	2.9	89
21	Areas of superconductivity and giant proximity effects in underdoped cuprates. Physical Review B, 2005, 71, .	1.1	87
22	Strain Doping: Reversible Single-Axis Control of a Complex Oxide Lattice via Helium Implantation. Physical Review Letters, 2015, 114, 256801.	2.9	84
23	Magnetism, conductivity, and orbital order in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$		

#	ARTICLE	IF	CITATIONS
37	<p>Exotic states of the two-leg ladder alkali metal iron selenides <math>A\text{Fe}_2\text{Se}_2</math></p> <p>Quantum confinement induced magnetism in <math>\text{LaNiO}_3</math>-<math>\text{LaMnO}_3</math> superlattices. Physical Review B, 2013, 87, .</p>	1.1	58
38	Exotic Magnetic Order in the Orbital-Selective Mott Regime of Multiorbital Systems. Physical Review Letters, 2014, 112, 106405.	2.9	58
39	Orbital-weight redistribution triggered by spin order in the pnictides. Physical Review B, 2010, 81, .	1.1	55
40	Frustrated Dipole Order Induces Noncollinear Proper Ferrielectricity in Two Dimensions. Physical Review Letters, 2019, 123, 067601.	2.9	52
41	Ground-state reference systems for expanding correlated fermions in one dimension. Physical Review A, 2008, 78, .	1.0	51
42	Microscopic model for the ferroelectric field effect in oxide heterostructures. Physical Review B, 2011, 84, .	1.1	51
43	Quantum confinement induced magnetism in $\text{LaNiO}_3$ - $\text{LaMnO}_3$ superlattices. Physical Review B, 2013, 87, .	1.1	50
44	Full control of magnetism in a manganite bilayer by ferroelectric polarization. Physical Review B, 2013, 88, .	1.1	46
45	Sequential structural and antiferromagnetic transitions in $\text{BaFe}_2\text{As}_2$ under pressure. Physical Review B, 2018, 97, .	1.1	46
46	Pressure-driven phase transition from antiferromagnetic semiconductor to nonmagnetic metal in the two-leg ladders $A\text{Fe}_2\text{Se}_2$		

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55	Inversion of Ferrimagnetic Magnetization by Ferroelectric Switching via a Novel Magnetoelectric Coupling. Physical Review Letters, 2016, 117, 037601.	2.9	36
56	Spin dynamics of the block orbital-selective Mott phase. Nature Communications, 2018, 9, 3736.	5.8	36
57	First-principles study of the low-temperature charge density wave phase in the quasi-one-dimensional Weyl chiral compound $\text{TaSe}_3$ . Physical Review B, 2020, 101, .	1.1	36
58	Heavy Quasiparticles in the Anderson Lattice Model. Physical Review Letters, 1996, 76, 279-282.	2.9	35
59	Magnetic properties and pairing tendencies of the iron-based superconducting ladder $\text{BaFe}_2\text{S}_3$ : Combined <i>ab initio</i> and density matrix renormalization group study. Physical Review B, 2016, 94, .	1.1	35
60	Direct experimental evidence of physical origin of electronic phase separation in manganites. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7090-7094.	3.3	35
61	Fingerprints of an orbital-selective Mott phase in the block magnetic state of $\text{BaFe}_2\text{Se}_3$ ladders. Communications Physics, 2019, 2, .	2.0	34
62	Large intrinsic anomalous Hall effect in $\text{SrIrO}_3$ induced by magnetic proximity effect. Nature Communications, 2021, 12, 3283.	5.8	34
63	Qualitative understanding of the sign of $d^2$ asymmetry in the extended $t^2J$ model and relevance for pairing properties. Physical Review B, 2001, 64, .	1.1	33
64	Method to study highly correlated nanostructures: The logarithmic-discretization embedded-cluster approximation. Physical Review B, 2008, 78, .	1.1	33
65	Highly anisotropic resistivities in the double-exchange model for strained manganites. Physical Review B, 2010, 82, .	1.1	33
66	Competition between Covalent Bonding and Charge Transfer at Complex-Oxide Interfaces. Physical Review Letters, 2014, 112, 196802.	2.9	33
67	SUPERCONDUCTIVITY: Enhanced: The Race to Beat the Cuprates. Science, 2001, 293, 2410-2411.	6.0	31
68	Novel Magnetic Block States in Low-Dimensional Iron-Based Superconductors. Physical Review Letters, 2019, 123, 027203.	2.9	31
69	Photoemission, inverse photoemission and superconducting correlations in Hubbard and $t$ - $J$ ladders: role of the anisotropy between legs and rungs. European Physical Journal B, 1999, 7, 53-66.	0.6	29
70	Electronic and magnetic properties of $\text{RMnO}_3/\text{AMnO}_3$ heterostructures. Physical Review B, 2009, 80, .	1.1	28
71	Designing Magnetism in High Entropy Oxides. Advanced Science, 2022, 9, e2200391.	5.6	28
72	Testing the Monte Carlo “mean field approximation in the one-band Hubbard model. Physical Review B, 2014, 90, .	1.1	27

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73	Block-spiral magnetism: An exotic type of frustrated order. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16226-16233.	3.3	25
74	Indications of spin-charge separation at short distance and stripe formation in the extended-Jmodel on ladders and planes. Physical Review B, 2000, 63, .	1.1	24
75	Short-range spin and charge correlations and local density of states in the colossal magnetoresistance regime of the single-orbital model for manganites. Physical Review B, 2008, 77, .	1.1	24
76	Transport through quantum dots: a combined DMRG and embedded-cluster approximation study. European Physical Journal B, 2009, 67, 527-542.	0.6	24
77	Pairing tendencies in a two-orbital Hubbard model in one dimension. Physical Review B, 2017, 96, .	1.1	24
78	Quasi-one-dimensional ferroelectricity and piezoelectricity in $WO_3$ halogens. Physical Review Materials, 2019, 3, .	1.1	24
79	Study of the intrinsic exchange bias at the SrRuO <sub>3</sub> /SrMnO <sub>3</sub> interface. Physical Review B, 2011, 84, .	1.1	23
80	Strain dependence of transition temperatures and structural symmetry of BiFeO <sub>3</sub> within the tetragonal-like structure. Applied Physics Letters, 2012, 101, .	1.5	23
81	Non-Fermi Liquid Behavior and Continuously Tunable Resistivity Exponents in the Anderson-Hubbard Model at Finite Temperature. Physical Review Letters, 2017, 119, 086601.	2.9	23
82	Charge-density-wave melting in the one-dimensional Holstein model. Physical Review B, 2020, 101, .	1.1	23
83	Quantum phase transition between orbital-selective Mott states in Hund's metals. Physical Review B, 2014, 90, .	1.1	22
84	Unexpected Intermediate State Photoinduced in the Metal-Insulator Transition of Submicrometer Phase-Separated Manganites. Physical Review Letters, 2018, 120, 267202.	2.9	22
85	Magnetic phase diagram of a five-orbital Hubbard model in the real-space Hartree-Fock approximation varying the electronic density. Physical Review B, 2014, 89, .	1.1	21
86	Peierls transition, ferroelectricity, and spin-singlet formation in monolayer $VOI_2$ . Physical Review B, 2021, 103, .	1.1	21
87	Skyrmion control of Majorana states in planar Josephson junctions. Communications Physics, 2021, 4, .	2.0	21
88	Nonmagnetic B-site impurity-induced ferromagnetic tendency in CE-type manganites. Physical Review B, 2009, 79, .	1.1	20
89	Conducting Jahn-Teller domain walls in undoped manganites. Physical Review B, 2010, 81, .	1.1	20
90	Density matrix renormalization group study of a three-orbital Hubbard model with spin-orbit coupling in one dimension. Physical Review B, 2017, 96, .	1.1	20

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91	Magnetic states of iron-based two-leg ladder tellurides. Physical Review B, 2019, 100, .	1.1	20
92	Iron telluride ladder compounds: Predicting the structural and magnetic properties of BaFe <sub>2</sub> Te <sub>3</sub> . Physical Review B, 2020, 101, .	1.1	20
93	Charge doping effects on magnetic properties of single-crystal $\text{BaFe}_2\text{Te}_3$		

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109	Role of degeneracy, hybridization, and nesting in the properties of multiorbital systems. Physical Review B, 2011, 84, .	1.1	15
110	Magnetic state of $KO_{0.8}Fe_{1.6}Se_2$ from a five-orbital Hubbard model in the Hartree-Fock approximation. Physical Review B, 2011, 84, .	1.1	15
111	Prediction of exotic magnetic states in the alkali-metal quasi-one-dimensional iron selenide compound $Na_2FeSe_2$ . Physical Review B, 2020, 102, .	1.1	15
112	Damped Dirac magnon in the metallic kagome antiferromagnet FeSn. Physical Review B, 2022, 105, .	1.1	15
113	Properties of the multiorbital Hubbard models for the iron-based superconductors. Frontiers of Physics, 2011, 6, 379-397.	2.4	14
114	Diverging nematic susceptibility, physical meaning of $\chi_{xx}$ and pseudogap in the spin fermion model for the pnictides. Physical Review B, 2014, 90, .	1.1	14
115	Photoexcitation of electronic instabilities in one-dimensional charge-transfer systems. Physical Review B, 2014, 90, .	1.1	14
116	Signatures of pairing in the magnetic excitation spectrum of strongly correlated two-leg ladders. Physical Review B, 2017, 96, .	1.1	14
117	Doping evolution of charge and spin excitations in two-leg Hubbard ladders: Comparing DMRG and FLEX results. Physical Review B, 2018, 97, .	1.1	14
118	Block orbital-selective Mott insulators: A spin excitation analysis. Physical Review B, 2020, 102, .	1.1	14
119	Origin of insulating Ferromagnetism in iron Oxychalcogenide $Ca_2FeO_4$ . Physical Review Letters, 2021, 127, 077204.	1.1	14
120	Magnetic excitation spectra of strongly correlated quasi-one-dimensional systems: Heisenberg versus Hubbard-like behavior. Physical Review B, 2016, 94, .	1.1	13
121	Bicollinear Antiferromagnetic Order, Monoclinic Distortion, and Reversed Resistivity Anisotropy in FeTe as a Result of Spin-Lattice Coupling. Physical Review Letters, 2016, 117, 117201.	2.9	13
122	Orbital-selective Mott phases of a one-dimensional three-orbital Hubbard model studied using computational techniques. Physical Review E, 2016, 93, 063313.	0.8	13
123	Phonon linewidth due to electron-phonon interactions with strong forward scattering in FeSe thin films on oxide substrates. Physical Review B, 2017, 96, .	1.1	13
124	BCS-BEC crossover in a $Ca_2FeO_4$ excitonic magnet. Physical Review B, 2020, 101, .	1.1	13
125	Origin of the magnetic and orbital ordering in $\text{Sr}_2\text{CrO}_4$ . Physical Review B, 2021, 103, .	1.1	13
126	Orbital-selective Peierls phase in the metallic dimerized chain $\text{MoOCl}_2$ . Physical Review B, 2021, 104, .	1.1	13

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127	Stripes in the Ising limit of models for the cuprates. <i>Physical Review B</i> , 2000, 62, 13926-13929.	1.1	12
128	Crossover from impurity to valence band in diluted magnetic semiconductors: Role of Coulomb attraction by acceptors. <i>Physical Review B</i> , 2007, 76, .	1.1	12
129	Theoretical study of the spin and charge dynamics of two-leg ladders as probed by resonant inelastic x-ray scattering. <i>Physical Review B</i> , 2019, 99, .	1.1	12
130	Emergence of superconductivity in doped multiorbital Hubbard chains. <i>Npj Quantum Materials</i> , 2020, 5, .	1.8	12
131	Photoinduced Hund excitons in the breakdown of a two-orbital Mott insulator. <i>Physical Review B</i> , 2018, 97, .	1.1	11
132	Weakly coupled alternating $S$ chains in the distorted honeycomb lattice compound $\text{NaMn}_2\text{P}_2\text{O}_{14}$ . <i>Physical Review B</i> , 2020, 102, .	1.1	11
133	Quantum magnetism of iron-based ladders: Blocks, spirals, and spin flux. <i>Physical Review B</i> , 2021, 104, .	1.1	11
134	Orbital ordering in the layered perovskite material $\text{CsVF}_4$ . <i>Physical Review Materials</i> , 2021, 5, .	0.9	11
135	Dynamical mean-field study of the ferromagnetic transition temperature of a two-band model for colossal magnetoresistance materials. <i>Physical Review B</i> , 2006, 73, .	1.1	10
136	Wave-packet dynamics in the one-dimensional extended Hubbard model. <i>Physical Review B</i> , 2013, 88, .	1.1	10
137	First principles study of the magnetic properties of $\text{LaOMnAs}$ . <i>Journal of Applied Physics</i> , 2014, 115, 17D723.	1.1	10
138	Signatures of a liquid-crystal transition in spin-wave excitations of skyrmions. <i>Communications Physics</i> , 2020, 3, .	2.0	10
139	Magnetic states of the quasi-one-dimensional iron chalcogenide $\text{BaFe}_2\text{As}_2$ . <i>Physical Review B</i> , 2021, 104, .	1.1	10
140	Oxygen magnetic polarization, nodes in spin density, and zigzag spin order in oxides. <i>Physical Review B</i> , 2021, 103, .	1.1	9
141	Quantum transitions of nematic phases in a spin-1 bilinear-biquadratic model and their implications for $\text{FeSe}$ . <i>Physical Review Research</i> , 2020, 2, .	1.3	9
142	Dynamics of doublon-holon pairs in Hubbard two-leg ladders. <i>Physical Review B</i> , 2012, 86, .	1.1	8
143	Isotropic in-plane quenched disorder and dilution induce a robust nematic state in electron-doped pnictides. <i>Physical Review B</i> , 2015, 92, .	1.1	8
144	Density matrix renormalization group study of nematicity in two dimensions: Application to a spin-1 bilinear-biquadratic model on the square lattice. <i>Physical Review B</i> , 2020, 101, .	1.1	8

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145	Multitude of topological phase transitions in bipartite dice and Lieb lattices with interacting electrons and Rashba coupling. <i>Physical Review B</i> , 2021, 104, .	1.1	8
146	Semi-Dirac and Weyl fermions in transition metal oxides. <i>Physical Review B</i> , 2021, 104, .	1.1	8
147	On-site attractive multiorbital Hord-Wave superconductors. <i>Physical Review B</i> , 2016, 93, .	1.1	7
148	Properties of $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ under extreme tensile strain. <i>Physical Review B</i> , 2020, 102, .	1.1	7
149	Estimation of biquadratic and bicubic Heisenberg effective couplings from multiorbital Hubbard models. <i>New Journal of Physics</i> , 2022, 24, 073014.	1.2	7
150	Coexistence of pairing tendencies and ferromagnetism in a doped two-orbital Hubbard model on two-leg ladders. <i>Physical Review B</i> , 2010, 81, .	1.1	6
151	Spin-orbit interaction driven dimerization in one-dimensional frustrated magnets. <i>Physical Review B</i> , 2017, 96, .	1.1	6
152	Block excitonic condensate at $n=3.5$ in a spin-orbit coupled $t_{2g}$ multiorbital Hubbard model. <i>Physical Review B</i> , 2019, 99, .	1.1	6
153	Nonmonotonic crossover in electronic phase separated manganite superlattices driven by the superlattice period. <i>Physical Review B</i> , 2020, 102, .	1.1	6
154	Strongly anisotropic electronic and magnetic structures in oxide dichlorides $\text{RuOCl}_2$ and $\text{OsOCl}_2$ . <i>Physical Review B</i> , 2022, 105, .	1.1	6
155	Constraints imposed by symmetry on pairing operators for the iron pnictides. <i>Physical Review B</i> , 2010, 81, .	1.1	5
156	Orbital selective directional conductor in the two-orbital Hubbard model. <i>Physical Review B</i> , 2016, 93, .	1.1	5
157	Efficiency of fermionic quantum distillation. <i>Physical Review A</i> , 2017, 96, .	1.0	5
158	Phenomenological three-orbital spin-fermion model for cuprates. <i>Physical Review B</i> , 2018, 98, .	1.1	5
159	Intertwined charge, spin, and pairing orders in doped iron ladders. <i>Physical Review B</i> , 2021, 103, .	1.1	5
160	Prediction of orbital-selective Mott phases and block magnetic states in the quasi-one-dimensional iron chain $\text{CeO}_2\text{Fe}_2$ under hole and electron doping. <i>Physical Review B</i> , 2022, 105, .		
161	Coupled Hubbard ladders at weak coupling: Pairing and spin excitations. <i>Physical Review B</i> , 2022, 105, .	1.1	5
162	Spin Andreev-like Reflection in Metal-Mott Insulator Heterostructures. <i>Physical Review Letters</i> , 2015, 114, 066401.	2.9	4

