

# Elbio Dagotto

## List of Publications by Year in descending order

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172  
papers

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53660

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#	ARTICLE	IF	CITATIONS
1	Prediction of orbital-selective Mott phases and block magnetic states in the quasi-one-dimensional iron chain $\text{CeO}_2\text{FeO}_2$ under hole and electron doping. <i>Physical Review B</i> , 2022, 105, .	5.8	21
2	Designing Magnetism in High Entropy Oxides. <i>Advanced Science</i> , 2022, 9, e2200391.	5.6	28
3	Theoretical study of the crystal and electronic properties of $\text{Ru}_3\text{OCl}_2$ . <i>Physical Review B</i> , 2022, 105, .	1.1	16
4	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
5	Damped Dirac magnon in the metallic kagome antiferromagnet $\text{FeSn}$ . <i>Physical Review B</i> , 2022, 105, .	1.1	15
6	Coupled Hubbard ladders at weak coupling: Pairing and spin excitations. <i>Physical Review B</i> , 2022, 105, .	1.1	5
7	Estimation of biquadratic and bicubic Heisenberg effective couplings from multiorbital Hubbard models. <i>New Journal of Physics</i> , 2022, 24, 073014.	1.2	7
8	Electronic structure, magnetic properties, and pairing tendencies of the copper-based honeycomb lattice $\text{Na}_2\text{VO}_2$ . <i>Physical Review B</i> , 2022, 105, .	1.1	0
9	Origin of the magnetic and orbital ordering in $\text{Sr}_2\text{CrO}_4$ . <i>Physical Review B</i> , 2021, 103, .	1.1	13
10	Peierls transition, ferroelectricity, and spin-singlet formation in monolayer $\text{VOI}_2$ . <i>Physical Review B</i> , 2021, 103, .	1.1	2
11	Interaction-induced topological phase transition and Majorana edge states in low-dimensional orbital-selective Mott insulators. <i>Nature Communications</i> , 2021, 12, 2955.	5.8	16
12	Oxygen magnetic polarization, nodes in spin density, and zigzag spin order in oxides. <i>Physical Review B</i> , 2021, 103, .	1.1	9
13	Large intrinsic anomalous Hall effect in $\text{SrIrO}_3$ induced by magnetic proximity effect. <i>Nature Communications</i> , 2021, 12, 3283.	5.8	34
14	Intertwined charge, spin, and pairing orders in doped iron ladders. <i>Physical Review B</i> , 2021, 103, .	1.1	5
15	Skyrmion control of Majorana states in planar Josephson junctions. <i>Communications Physics</i> , 2021, 4, .	2.0	21
16	Quantum magnetism of iron-based ladders: Blocks, spirals, and spin flux. <i>Physical Review B</i> , 2021, 104, .	1.1	11
17	Origin of insulating Ferromagnetism in iron Oxychalcogenide $\text{CeO}_2\text{FeO}_2$ . <i>Physical Review Letters</i> , 2021, 127, 077204.	2.0	14
18	Orbital-selective Peierls phase in the metallic dimerized chain $\text{MoOCl}_2$ . <i>Physical Review B</i> , 2021, 104, .	1.1	13

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19	Charge doping effects on magnetic properties of single-crystal $\text{CuMnAs}$		
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37	BCS-BEC crossover in a $t$ - $J$ excitonic magnet. Physical Review B, 2020, 101, .		
38	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
39	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
40	Density matrix renormalization group study of nematicity in two dimensions: Application to a spin-1 bilinear-biquadratic model on the square lattice. Physical Review B, 2020, 101, .	1.1	8
41	Charge-density-wave melting in the one-dimensional Holstein model. Physical Review B, 2020, 101, .	1.1	23
42	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
43	Flat bands and ferrimagnetic order in electronically correlated dice-lattice ribbons. Physical Review B, 2020, 102, .	1.1	17
44	Quantum transitions of nematic phases in a spin-1 bilinear-biquadratic model and their implications for FeSe. Physical Review Research, 2020, 2, .	1.3	9
45	Quench dynamics of two-component dipolar fermions subject to a quasiperiodic potential. Physical Review B, 2020, 102, .	1.1	2
46	Frustrated Dipole Order Induces Noncollinear Proper Ferrielectricity in Two Dimensions. Physical Review Letters, 2019, 123, 067601.	2.9	52
47	Novel Magnetic Block States in Low-Dimensional Iron-Based Superconductors. Physical Review Letters, 2019, 123, 027203.	2.9	31
48	Topological Hall effect and emergent skyrmion crystal at manganite-iridate oxide interfaces. Physical Review B, 2019, 100, .	1.1	44
49	Fingerprints of an orbital-selective Mott phase in the block magnetic state of BaFe <sub>2</sub> Se <sub>3</sub> ladders. Communications Physics, 2019, 2, .	2.0	34
50	Theoretical study of the spin and charge dynamics of two-leg ladders as probed by resonant inelastic x-ray scattering. Physical Review B, 2019, 99, .	1.1	12
51	Block excitonic condensate at $n=3.5$ in a spin-orbit coupled $t_{2g}$ multiorbital Hubbard model. Physical Review B, 2019, 99, .	1.1	6
52	Magnetoelectricity in multiferroics: a theoretical perspective. National Science Review, 2019, 6, 629-641.	4.6	129
53	Magnetic states of iron-based two-leg ladder tellurides. Physical Review B, 2019, 100, .	1.1	20
54	Quasi-one-dimensional ferroelectricity and piezoelectricity in $WOX$ halogens. Physical Review Materials, 2019, 3, .	1.1	24

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55	Sequential structural and antiferromagnetic transitions in $\text{BaFe}_2\text{As}_2$ under pressure. Physical Review B, 2018, 97, .		
56	Accuracy of the microcanonical Lanczos method to compute real-frequency dynamical spectral functions of quantum models at finite temperatures. Physical Review E, 2018, 97, 043308.	0.8	16
57	Spin dynamics of the block orbital-selective Mott phase. Nature Communications, 2018, 9, 3736.	5.8	36
58	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
59	Unexpected Intermediate State Photoinduced in the Metal-Insulator Transition of Submicrometer Phase-Separated Manganites. Physical Review Letters, 2018, 120, 267202.	2.9	22
60	Phenomenological three-orbital spin-fermion model for cuprates. Physical Review B, 2018, 98, .	1.1	5
61	Computing Resonant Inelastic X-Ray Scattering Spectra Using The Density Matrix Renormalization Group Method. Scientific Reports, 2018, 8, 11080.	1.6	19
62	Photoinduced Hund excitons in the breakdown of a two-orbital Mott insulator. Physical Review B, 2018, 97, .	1.1	11
63	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
64	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
65	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
66	Pairing tendencies in a two-orbital Hubbard model in one dimension. Physical Review B, 2017, 96, .	1.1	24
67	Signatures of pairing in the magnetic excitation spectrum of strongly correlated two-leg ladders. Physical Review B, 2017, 96, .	1.1	14
68	Pressure-driven phase transition from antiferromagnetic semiconductor to nonmagnetic metal in the two-leg ladders		

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73	Magnetic excitation spectra of strongly correlated quasi-one-dimensional systems: Heisenberg versus Hubbard-like behavior. <i>Physical Review B</i> , 2016, 94, .	1.1	13
74	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. <i>Physical Review B</i> , 2016, 94, .	1.1	35
75	Bicollinear Antiferromagnetic Order, Monoclinic Distortion, and Reversed Resistivity Anisotropy in FeTe as a Result of Spin-Lattice Coupling. <i>Physical Review Letters</i> , 2016, 117, 117201.	2.9	13
76	Orbital selective directional conductor in the two-orbital Hubbard model. <i>Physical Review B</i> , 2016, 93, .	1.1	5
77	On-site attractive multiorbital Hamiltonian for d-wave superconductors. <i>Physical Review B</i> , 2016, 93, .	1.1	7
78	Orbital-selective Mott phases of a one-dimensional three-orbital Hubbard model studied using computational techniques. <i>Physical Review E</i> , 2016, 93, 063313.	0.8	13
79	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
80	Parallelized traveling cluster approximation to study numerically spin-fermion models on large lattices. <i>Physical Review E</i> , 2015, 91, 063303.	0.8	19
81	Strain Doping: Reversible Single-Axis Control of a Complex Oxide Lattice via Helium Implantation. <i>Physical Review Letters</i> , 2015, 114, 256801.	2.9	84
82	Spin Andreev-like Reflection in Metal-Mott Insulator Heterostructures. <i>Physical Review Letters</i> , 2015, 114, 066401.	2.9	4
83	Quantum phase transition between orbital-selective Mott states in Hund's metals. <i>Physical Review B</i> , 2014, 90, .	1.1	22
84	Magnetic phase diagram of a five-orbital Hubbard model in the real-space Hartree-Fock approximation varying the electronic density. <i>Physical Review B</i> , 2014, 89, .	1.1	21
85	Magnetic states of the five-orbital Hubbard model for one-dimensional iron-based superconductors. <i>Physical Review B</i> , 2014, 90, .	1.1	18
86	First principles study of the magnetic properties of LaOMnAs. <i>Journal of Applied Physics</i> , 2014, 115, 17D723.	1.1	10
87	<i>Ab initio</i> Quantum Monte Carlo Calculations of Spin Superexchange in Cuprates: The Benchmarking Case of $\text{Ca}_2\text{CuO}_2\text{Cl}_2$ . <i>Physical Review X</i> , 2014, 4, .	2.8	61
88	Competition between Covalent Bonding and Charge Transfer at Complex-Oxide Interfaces. <i>Physical Review Letters</i> , 2014, 112, 196802.	2.9	33
89	Diverging nematic susceptibility, physical meaning of $T^*$ and pseudogap in the spin fermion model for the pnictides. <i>Physical Review B</i> , 2014, 90, .	1.1	4
90	Photoexcitation of electronic instabilities in one-dimensional charge-transfer systems. <i>Physical Review B</i> , 2014, 90, .	1.1	14

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91	A High- $T_c$ Superconductor with a High- $T_c$ Superconducting Phase. Physical Review Letters, 2014, 112, 106405.	2.9	58
92	Exotic Magnetic Order in the Orbital-Selective Mott Regime of Multiorbital Systems. Physical Review Letters, 2014, 112, 106405.	2.9	58
93	Testing the Monte Carlo "mean field approximation in the one-band Hubbard model. Physical Review B, 2014, 90, .	1.1	27
94	Charge Excitations in Two-Leg Ladders: A tDMRG Approach. Journal of Superconductivity and Novel Magnetism, 2013, 26, 2193-2196.	0.8	0
95	Full control of magnetism in a manganite bilayer by ferroelectric polarization. Physical Review B, 2013, 88, .	1.1	46
96	RPA analysis of a two-orbital model for the BiS <sub>2</sub> -based superconductors. Physical Review B, 2013, 87, .	1.1	75
97	Colloquium: The unexpected properties of alkali metal iron selenide superconductors. Reviews of Modern Physics, 2013, 85, 849-867.	16.4	291
98	Wave-packet dynamics in the one-dimensional extended Hubbard model. Physical Review B, 2013, 88, .	1.1	10
99	Quantum confinement induced magnetism in LaNiO <sub>3</sub> -LaMnO <sub>3</sub> superlattices. Physical Review B, 2013, 87, .	1.1	50
100	Magnetic states of the two-leg ladder alkali metal iron selenide superlattices. Physical Review B, 2013, 87, .	1.1	58
101	Dynamics of doublon-holon pairs in Hubbard two-leg ladders. Physical Review B, 2012, 86, .	1.1	8

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109	Strong spin-orbit coupling at the interface of BiFeO <sub>3</sub> /LaMnO <sub>3</sub> . Physical Review B, 2011, 84, .	1.1	59
110	Multiferroic properties of CaMnO <sub>3</sub> . Physical Review B, 2011, 84, .	1.1	142
111	Properties of the multiorbital Hubbard models for the iron-based superconductors. Frontiers of Physics, 2011, 6, 379-397.	2.4	14
112	Ab initio 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
113	Emergent dimensional reduction of the spin sector in a model for narrow-band manganites. Physical Review B, 2011, 84, .	1.1	16
114	Role of degeneracy, hybridization, and nesting in the properties of multiorbital systems. Physical Review B, 2011, 84, .	1.1	15
115	Magnetic state of K <sub>0.8</sub> Fe <sub>1.6</sub> Se <sub>2</sub> from a five-orbital Hubbard model in the Hartree-Fock approximation. Physical Review B, 2011, 84, .	1.1	15
116	Coexistence of pairing tendencies and ferromagnetism in a doped two-orbital Hubbard model on two-leg ladders. Physical Review B, 2010, 81, .	1.1	6
117	Numerical analysis of the spatial range of the Kondo effect. Physical Review B, 2010, 81, .	1.1	43
118	Orbital-weight redistribution triggered by spin order in the pnictides. Physical Review B, 2010, 81, .	1.1	55
119	Real-time dynamics of particle-hole excitations in Mott insulator-metal junctions. Physical Review B, 2010, 81, .	1.1	18
120	Constraints imposed by symmetry on pairing operators for the iron pnictides. Physical Review B, 2010, 81, .	1.1	5
121	Conducting Jahn-Teller domain walls in undoped manganites. Physical Review B, 2010, 81, .	1.1	20
122	Highly anisotropic resistivities in the double-exchange model for strained manganites. Physical Review B, 2010, 82, .	1.1	33
123	Nonequilibrium electronic transport in a one-dimensional Mott insulator. Physical Review B, 2010, 82, .	1.1	74
124	Neutron and ARPES constraints on the couplings of the multiorbital Hubbard model for the iron pnictides. Physical Review B, 2010, 82, .	1.1	65
125	Three orbital model for the iron-based superconductors. Physical Review B, 2010, 81, .	1.1	177
126	Nonmagnetic B-site impurity-induced ferromagnetic tendency in CE-type manganites. Physical Review B, 2009, 79, .	1.1	20



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127	Many-body electronic structure and Kondo properties of cobalt-porphyrin molecules. Physical Review B, 2009, 80, .	1.1	38
128	Electron-lattice coupling and partial nesting as the origin of Fermi arcs in manganites. Physical Review B, 2009, 80, .	1.1	19
129	Real-time simulations of nonequilibrium transport in the single-impurity Anderson model. Physical Review B, 2009, 79, .	1.1	157
130	Quantum distillation: Dynamical generation of low-entropy states of strongly correlated fermions in an optical lattice. Physical Review A, 2009, 80, .	1.0	79
131	Electronic and magnetic properties of RMnO <sub>3</sub> /AMnO <sub>3</sub> heterostructures. Physical Review B, 2009, 80, .	1.1	28
132	Transport through quantum dots: a combined DMRG and embedded-cluster approximation study. European Physical Journal B, 2009, 67, 527-542.	0.6	24
133	Double-exchange model study of multiferroic RMnO <sub>3</sub> perovskites. European Physical Journal B, 2009, 71, 339-344.	0.6	16
134	Magnetic and metallic state at intermediate Hubbard $U$ coupling in multiorbital models for undoped iron pnictides. Physical Review B, 2009, 79, .	1.1	62
135	Properties of a two-orbital model for oxypnictide superconductors: Magnetic order, B <sub>2g</sub> spin-singlet pairing channel, and its nodal structure. Physical Review B, 2009, 79, .	1.1	111
136	Ferromagnetic tendency at the surface of CE-type charge-ordered manganites. Physical Review B, 2008, 78, .	1.1	121
137	Origin of multiferroic spiral spin order in the $R\text{MnO}_3$ perovskites. Physical Review B, 2008, 78, .	1.1	106
138	Magnetism, conductivity, and orbital order in $R\text{MnO}_3$ perovskites. Physical Review B, 2008, 78, .		

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145	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
146	Metallic interface at the boundary between band and Mott insulators. <i>Physical Review B</i> , 2006, 74, .	1.1	37
147	Hyperfine interaction induced decoherence of electron spins in quantum dots. <i>Physical Review B</i> , 2006, 74, .	1.1	73
148	Areas of superconductivity and giant proximity effects in underdoped cuprates. <i>Physical Review B</i> , 2005, 71, .	1.1	87
149	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. <i>Physical Review B</i> , 2003, 68, .	1.1	105
150	Global versus local ferromagnetism in a model for diluted magnetic semiconductors studied with Monte Carlo techniques. <i>Physical Review B</i> , 2002, 65, .	1.1	67
151	Resistivity of Mixed-Phase Manganites. <i>Physical Review Letters</i> , 2001, 86, 135-138.	2.9	241
152	SUPERCONDUCTIVITY: Enhanced: The Race to Beat the Cuprates. <i>Science</i> , 2001, 293, 2410-2411.	6.0	31
153	Qualitative understanding of the sign of $\epsilon^2$ asymmetry in the extended $t$ - $J$ model and relevance for pairing properties. <i>Physical Review B</i> , 2001, 64, .	1.1	33
154	Colossal magnetoresistant materials: the key role of phase separation. <i>Physics Reports</i> , 2001, 344, 1-153.	10.3	3,346
155	DOPED STRIPES EVOLVING FROM THE ONE-HOLE PROPERTIES OF THE ANTIFERROMAGNETIC INSULATOR. <i>International Journal of Modern Physics B</i> , 2000, 14, 3424-3431.	1.0	0
156	Indications of spin-charge separation at short distance and stripe formation in the extended $t$ - $J$ model on ladders and planes. <i>Physical Review B</i> , 2000, 63, .	1.1	24
157	Stripes in the Ising limit of models for the cuprates. <i>Physical Review B</i> , 2000, 62, 13926-13929.	1.1	12
158	Doped Stripes in Models for the Cuprates Emerging from the One-Hole Properties of the Insulator. <i>Physical Review Letters</i> , 2000, 84, 5844-5847.	2.9	60
159	Photoemission, inverse photoemission and superconducting correlations in Hubbard and $t$ - $J$ ladders: role of the anisotropy between legs and rungs. <i>European Physical Journal B</i> , 1999, 7, 53-66.	0.6	29
160	Unified quantum mechanical picture for confined spinons in dimerized and frustrated spin chains. <i>European Physical Journal B</i> , 1999, 7, 67-77.	0.6	40
161	Experiments on ladders reveal a complex interplay between a spin-gapped normal state and superconductivity. <i>Reports on Progress in Physics</i> , 1999, 62, 1525-1571.	8.1	372
162	Phase Separation in Electronic Models for Manganites. <i>Physical Review Letters</i> , 1998, 80, 845-848.	2.9	486

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163	The Novel Ladder Superconductors: A Brief Review. International Journal of Modern Physics B, 1998, 12, 2898-2900.	1.0	0
164	Phase Diagram of Electronic Models for Transition Metal Oxides in One Dimension. Physical Review Letters, 1997, 79, 713-716.	2.9	89
165	Local Enhancement of Antiferromagnetic Correlations by Nonmagnetic Impurities. Physical Review Letters, 1997, 78, 3563-3566.	2.9	101
166	Surprises on the Way from One- to Two-Dimensional Quantum Magnets: The Ladder Materials. Science, 1996, 271, 618-623.	6.0	1,506
167	Superconductivity in the cuprates as a consequence of antiferromagnetism and a large hole density of states. Journal of Superconductivity and Novel Magnetism, 1996, 9, 379-387.	0.5	1
168	Spin Dynamics of Hole Doped $Y_{2-x}Ca_xBaNiO_5$ . Physical Review Letters, 1996, 76, 1731-1734.	2.9	44
169	Heavy Quasiparticles in the Anderson Lattice Model. Physical Review Letters, 1996, 76, 279-282.	2.9	35
170	Magnetic Raman Scattering in Two-Dimensional Spin-1/2 Heisenberg Antiferromagnets: Spectral Shape Anomaly and Magnetostrictive Effects. Physical Review Letters, 1995, 75, 553-556.	2.9	38
171	Correlated electrons in high-temperature superconductors. Reviews of Modern Physics, 1994, 66, 763-840.	16.4	2,716
172	Superconductivity in ladders and coupled planes. Physical Review B, 1992, 45, 5744-5747.	1.1	693