

Elbio Dagotto

List of Publications by Year in descending order

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172
papers

15,336
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53660

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17055

122
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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. <i>Physics Reports</i> , 2001, 344, 1-153. | 10.3 | 3,346 |
| 2 | Correlated electrons in high-temperature superconductors. <i>Reviews of Modern Physics</i> , 1994, 66, 763-840. | 16.4 | 2,716 |
| 3 | Surprises on the Way from One- to Two-Dimensional Quantum Magnets: The Ladder Materials. <i>Science</i> , 1996, 271, 618-623. | 6.0 | 1,506 |
| 4 | Superconductivity in ladders and coupled planes. <i>Physical Review B</i> , 1992, 45, 5744-5747. | 1.1 | 693 |
| 5 | Phase Separation in Electronic Models for Manganites. <i>Physical Review Letters</i> , 1998, 80, 845-848. | 2.9 | 486 |
| 6 | Magnetism and its microscopic origin in iron-based high-temperature superconductors. <i>Nature Physics</i> , 2012, 8, 709-718. | 6.5 | 481 |
| 7 | 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 |
| 8 | <i>Colloquium</i> : The unexpected properties of alkali metal iron selenide superconductors. <i>Reviews of Modern Physics</i> , 2013, 85, 849-867. | 16.4 | 291 |
| 9 | Resistivity of Mixed-Phase Manganites. <i>Physical Review Letters</i> , 2001, 86, 135-138. | 2.9 | 241 |
| 10 | Three orbital model for the iron-based superconductors. <i>Physical Review B</i> , 2010, 81, . | 1.1 | 177 |
| 11 | Real-time simulations of nonequilibrium transport in the single-impurity Anderson model. <i>Physical Review B</i> , 2009, 79, . | 1.1 | 157 |
| 12 | When Oxides Meet Face to Face. <i>Science</i> , 2007, 318, 1076-1077. | 6.0 | 144 |
| 13 | Multiferroic properties of CaVInO_7 . <i>Physical Review B</i> , 2011, 84, . | 1.1 | 142 |
| 14 | Magnetoelectricity in multiferroics: a theoretical perspective. <i>National Science Review</i> , 2019, 6, 629-641. | 4.6 | 129 |
| 15 | Ferromagnetic tendency at the surface of CE-type charge-ordered manganites. <i>Physical Review B</i> , 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. <i>Physical Review B</i> , 2009, 79, . | 1.1 | 111 |
| 17 | Origin of multiferroic spiral spin order in the R_2MnO_5 . <i>Physical Review B</i> , 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. <i>Physical Review B</i> , 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 $A\text{Fe}_2\text{Se}_2$</p> <p>Quantum confinement induced magnetism in LaNiO_3-LaMnO_3 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 LaNiO_3 - 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 BaFe_2As_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 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 BaFe_2S_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 BaFe_2Se_3 ladders. Communications Physics, 2019, 2, . | 2.0 | 34 |
| 62 | Large intrinsic anomalous Hall effect in 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 - J 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 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 73 | Blockâ€“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-t-J model 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 ₃ /SrMnO ₃ interface. Physical Review B, 2011, 84, . | 1.1 | 23 |
| 80 | Strain dependence of transition temperatures and structural symmetry of BiFeO ₃ 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 ₂ Te ₃ . Physical Review B, 2020, 101, . | 1.1 | 20 |
| 93 | Charge doping effects on magnetic properties of single-crystal $\langle \text{mml}:\text{math}$ | | |

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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 χ_{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 $CaFe_2O_4$. 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 $CaFe_2O_4$ excitonic magnet. Physical Review B, 2020, 101, . | 1.1 | 13 |
| 125 | Origin of the magnetic and orbital ordering in $\hat{I}\pm\hat{A}\sim Sr_2CrO_4$. Physical Review B, 2021, 103, . | 1.1 | 13 |
| 126 | Orbital-selective Peierls phase in the metallic dimerized chain $MoOCl_2$. Physical Review B, 2021, 104, . | 1.1 | 13 |

| # | ARTICLE | IF | CITATIONS |
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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 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 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 $\text{BaFe}_2\text{P}_2\text{O}_{14}$. <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 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 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 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 La _{0.7} Ca _{0.3} 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 RuOCl_2 and 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 CeO_2Fe_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 |

