Claude Ederer

List of Publications by Citations

64 papers	4,404 citations	28 h-index	66 g-index
70 ext. papers	4,829 ext. citations	3.7 avg, IF	5.99 L-index

#	Paper	IF	Citations
64	Weak ferromagnetism and magnetoelectric coupling in bismuth ferrite. *Physical Review B*, **2005**, 71,	3.3	1109
63	Effect of epitaxial strain on the spontaneous polarization of thin film ferroelectrics. *Physical Review Letters*, **2005**, 95, 257601	7.4	457
62	Influence of strain and oxygen vacancies on the magnetoelectric properties of multiferroic bismuth ferrite. *Physical Review B*, **2005**, 71,	3.3	301
61	First principles study of the multiferroics BiFeO3, Bi2FeCrO6, and BiCrO3: Structure, polarization, and magnetic ordering temperature. *Physical Review B*, **2005**, 72,	3.3	250
60	Strain-induced isosymmetric phase transition in BiFeO3. *Physical Review B*, **2010**, 81,	3.3	225
59	First principles studies of multiferroic materials. *Journal of Physics Condensed Matter*, **2009**, 21, 303201	1.8	147
58	Towards a microscopic theory of toroidal moments in bulk periodic crystals. *Physical Review B*, **2007**, 76,	3.3	131
57	Epitaxial strain effects in the spinel ferrites CoFe2O4 and NiFe2O4 from first principles. *Physical Review B*, **2010**, 82,	3.3	115
56	Recent progress in first-principles studies of magnetoelectric multiferroics. *Current Opinion in Solid State and Materials Science*, **2005**, 9, 128-139	12	94
55	Potentially multiferroic Aurivillius phase Bi5FeTi3O15: Cation site preference, electric polarization, and magnetic coupling from first principles. *Physical Review B*, **2014**, 90,	3.3	88
54	Origin of ferroelectricity in the multiferroic barium fluorides BaMF4: A first principles study. *Physical Review B*, **2006**, 74,	3.3	86
53	First-principles calculation of magnetoelastic coefficients and magnetostriction in the spinel ferrites CoFe2O4 and NiFe2O4. *Physical Review B*, **2012**, 86,	3.3	84
52	Electric-field switchable magnetization via the Dzyaloshinskii–Moriya interaction: FeTiO3versus BiFeO3. *Journal of Physics Condensed Matter*, **2008**, 20, 434219	1.8	81
51	Effect of epitaxial strain on the cation distribution in spinel ferrites CoFe2O4 and NiFe2O4: A density functional theory study. *Applied Physics Letters*, **2011**, 99, 081916	3.4	69
50	From the bulk to monatomic wires: An ab initio study of magnetism in Co systems with various dimensionality. *Physical Review B*, **2002**, 66,	3.3	63
49	First-principles-based calculation of the electrocaloric effect in BaTiO3: A comparison of direct and indirect methods. *Physical Review B*, **2016**, 93,	3.3	60
48	Magnetic coupling in CoCr2O4 and MnCr2O4: An LSDA+U study. *Physical Review B*, **2007**, 76,	3.3	60

47	Spin-filtering efficiency of ferrimagnetic spinels CoFe2O4 and NiFe2O4. *Physical Review B*, **2013**, 87,	3.3	59
46	Experimental and computational investigation of structure and magnetism in pyrite Co1−xFexS2: Chemical bonding and half-metallicity. *Physical Review B*, **2004**, 70,	3.3	57
45	Electric-field-switchable magnets: The case of BaNiF4. *Physical Review B*, **2006**, 74,	3.3	51
44	Electrocaloric effect in BaTiO3 at all three ferroelectric transitions: Anisotropy and inverse caloric effects. *Physical Review B*, **2017**, 96,	3.3	41
43	Magnetism in systems with various dimensionalities: A comparison between Fe and Co. *Physical Review B*, **2003**, 68,	3.3	39
42	Biquadratic and ring exchange interactions in orthorhombic perovskite manganites. *Physical Review B*, **2015**, 91,	3.3	36
41	Theory of induced magnetic moments and x-ray magnetic circular dichroism in Co-Pt multilayers. *Physical Review B*, **2002**, 66,	3.3	36
40	Electrocaloric effect in BaTiO3: A first-principles-based study on the effect of misfit strain. *Applied Physics Letters*, **2014**, 104, 212902	3.4	32
39	Correlation effects in p-electron magnets: Electronic structure of RbO2 from first principles. *Physical Review B*, **2009**, 80,	3.3	31
38	Origins of the Inverse Electrocaloric Effect. *Energy Technology*, **2018**, 6, 1491-1511	3.5	29
37	Structural distortions and model Hamiltonian parameters: From LSDA to a tight-binding description of LaMnO3. *Physical Review B*, **2007**, 76,	3.3	28
36	Mechanism of ferroelectric instabilities in non-d0 perovskites: LaCrO3 versus CaMnO3. *Physical Review B*, **2011**, 83,	3.3	27
35	Tuning the metal-insulator transition in d1 and d2 perovskites by epitaxial strain: A first-principles-based study. *Physical Review B*, **2016**, 94,	3.3	24
34	Interplay between breathing mode distortion and magnetic order in rare-earth nickelates RNiO3 within DFT+U. *Physical Review B*, **2017**, 96,	3.3	23
33	Dielectric response of epitaxially strained CoFe2O4 spinel thin films. *Physical Review B*, **2012**, 86,	3.3	22
32	Strain-induced insulator-to-metal transition in LaTiO3 within DFT + DMFT. *Physical Review B*, **2014**, 89,	3.3	20
31	Magnetic order in four-layered Aurivillus phases. *Physical Review B*, **2017**, 95,	3.3	19
30	Buried In-Plane Ferroelectric Domains in Fe-Doped Single-Crystalline Aurivillius Thin Films. *ACS Applied Electronic Materials*, **2019**, 1, 1019-1028	4	19

29	Mechanism and control parameters of the coupled structural and metal-insulator transition in nickelates. *Physical Review B*, **2019**, 99,	3.3	19
28	Energetics of the coupled electronic-structural transition in the rare-earth nickelates. *Npj Quantum Materials*, **2019**, 4,	5	15
27	Structural and electronic properties of epitaxially strained LaVO3 from density functional theory and dynamical mean-field theory. *Physical Review B*, **2015**, 92,	3.3	15
26	Combined first-principles and model Hamiltonian study of the perovskite series RMnO3 (R=La,Pr,Nd,Sm,Eu, and Gd). *Physical Review B*, **2016**, 93,	3.3	14
25	Calculation of model Hamiltonian parameters for LaMnO3 using maximally localized Wannier functions. *Physical Review B*, **2010**, 81,	3.3	13
24	Effect of Hubbard U on the construction of low-energy Hamiltonians for LaMnO3 via maximally localized Wannier functions. *Physical Review B*, **2011**, 84,	3.3	13
23	Rubidium superoxide: A p-electron Mott insulator. *Physical Review B*, **2012**, 86,	3.3	13
22	Ab initio phase diagram of BaTiO3 under epitaxial strain revisited. *Applied Physics Letters*, **2015**, 107, 102901	3.4	12
21	Anisotropy of orbital moments and magnetic dipole term Tz in CrO2: An ab initio study. *Physical Review B*, **2004**, 69,	3.3	12
20	Comment on the analysis of angle-dependent X-ray magnetic circular dichroism in systems with reduced dimensionality. *Journal of Electron Spectroscopy and Related Phenomena*, **2003**, 130, 97-100	1.7	12
19	Metal-insulator transition in CaVO3 thin films: Interplay between epitaxial strain, dimensional confinement, and surface effects. *Physical Review B*, **2018**, 97,	3.3	11
18	Prediction of a Giant Magnetoelectric Cross-Caloric Effect around a Tetracritical Point in Multiferroic SrMnO_{3}. *Physical Review Letters*, **2020**, 124, 167201	7.4	11
17	Electronic localization in CaVO3 films via bandwidth control. *Npj Quantum Materials*, **2019**, 4,	5	10
16	Strain effects in spinel ferrite thin films from first principles calculations. *Journal of Physics: Conference Series*, **2011**, 292, 012014	0.3	10
15	First-principles-based strain and temperature-dependent ferroic phase diagram of SrMnO3. *Physical Review Materials*, **2018**, 2,	3.2	10
14	Controlling the cation distribution and electric polarization with epitaxial strain in Aurivillius-phase Bi5FeTi3O15. *Applied Physics Letters*, **2016**, 108, 082903	3.4	10
13	The Impact of Hysteresis on the Electrocaloric Effect at First-Order Phase Transitions. *Physica Status Solidi (B): Basic Research*, **2018**, 255, 1700308	1.3	9
12	Hund excitations and the efficiency of Mott solar cells. *Physical Review B*, **2019**, 100,	3.3	7

List of Publications

11	Effect of charge self-consistency in DFT+DMFT calculations for complex transition metal oxides. *Physical Review Research*, **2020**, 2,	3.9	7
10	Tuning the caloric response of BaTiO 3 by tensile epitaxial strain. *Europhysics Letters*, **2016**, 115, 47002	1.6	6
9	Magnetic exchange interactions in SrMnO3. *Physical Review B*, **2020**, 101,	3.3	5
8	DFT+DMFT study of oxygen vacancies in a Mott insulator. *Physical Review B*, **2019**, 100,	3.3	2
7	Charge transfer in LaVO3/LaTiO3 multilayers: Strain-controlled dimensionality of interface metallicity between two Mott insulators. *Physical Review Materials*, **2019**, 3,	3.2	2
6	Interplay between chemical order and magnetic properties in L10 FeNi (tetrataenite): A first-principles study. *Physical Review Materials*, **2020**, 4,	3.2	2
5	Oxygen vacancies in strontium titanate: A DFT+DMFT study. *Physical Review Research*, **2021**, 3,	3.9	2
4	Magnetic and ferroelectric properties of Sr1−xBaxMnO3 from first principles. *Physical Review Research*, **2020**, 2,	3.9	1
3	Charge disproportionation and Hund's insulating behavior in a five-orbital Hubbard model applicable to d4 perovskites. *Physical Review B*, **2021**, 104,	3.3	1
2	Nanosession: Mott Insulators and Transitions115-122		1
1	Understanding the Effect of Doping and Epitaxial Strain on the Ferroelectric Polarization of Layered Perovskite Thin Films. *Microscopy and Microanalysis*, **2017**, 23, 1606-1607	0.5	