Hyun-Joo Koo

List of Publications by Citations

77 papers	1,843 citations	23 h-index	41 g-index
85 ext. papers	2,072 ext. citations	4.9 avg, IF	4.68 L-index

#	Paper	IF	Citations
77	Spin exchange interactions and magnetic structures of extended magnetic solids with localized spins: theoretical descriptions on formal, quantitative and qualitative levels. *Journal of Solid State Chemistry*, **2003**, 176, 417-481	3.3	254
76	Magnetic properties and energy-mapping analysis. *Dalton Transactions*, **2013**, 42, 823-53	4.3	215
75	Analysis of the spin exchange interactions and the ordered magnetic structures of lithium transition metal phosphates LiMPO4 (M = Mn, Fe, Co, Ni) with the olivine structure. *Inorganic Chemistry*, **2005**, 44, 2407-13	5.1	92
74	Flux growth of vanadyl pyrophosphate, (VO)(2)P(2)O(7), and spin dimer analysis of the spin exchange interactions of (VO)(2)P(2)O(7) and vanadyl hydrogen phosphate, VO(HPO(4)).0.5H(2)O. *Inorganic Chemistry*, **2002**, 41, 4664-72	5.1	77
73	Prediction of Spin Orientations in Terms of HOMO-LUMO Interactions Using Spin-Orbit Coupling as Perturbation. *Accounts of Chemical Research*, **2015**, 48, 3080-7	24.3	56
72	Dimethylammonium copper formate [(CH3)2NH2]Cu(HCOO)3: A metal-organic framework with quasi-one-dimensional antiferromagnetism and magnetostriction. *Physical Review B*, **2013**, 87,	3.3	54
71	Cu(HCO2)2L {L = pyrazine, 4,4?-bipyridine}: employing the formate anion as a building block in three-dimensional coordination polymers. *Dalton Transactions*, **2003**, 2905-2911	4.3	53
70	Interpretation of the magnetic structures of Cu2Te2O5X2 (X = Cl, Br) and Ca3.1Cu0.9RuO6 on the basis of electronic structure considerations: cases for strong super-superexchange interactions involving Cu2+ ions. *Inorganic Chemistry*, **2003**, 42, 3898-906	5.1	50
69	Spin dimer, electronic band structure and classical spin analyses of spin exchange interactions and ordered magnetic structures of magnetic solids. *Solid State Sciences*, **2005**, 7, 827-852	3.4	50
68	Investigation of the crystal structure and the structural and magnetic properties of SrCu2(PO4)2. *Inorganic Chemistry*, **2005**, 44, 6632-40	5.1	48
67	A genuine two-dimensional Ising ferromagnet with magnetically driven re-entrant transition. *Angewandte Chemie - International Edition*, **2012**, 51, 11745-9	16.4	45
66	Analysis of the spin lattice model for the spin-gapped layered compounds Na(3)Cu(2)SbO(6) and Na(2)Cu(2)TeO(6) on the basis of electronic structure calculations. *Inorganic Chemistry*, **2008**, 47, 128-33	5.1	43
65	Effect of magnetic dipole-dipole interactions on the spin orientation and magnetic ordering of the spin-ladder compound Sr3Fe2O5. *Inorganic Chemistry*, **2009**, 48, 9051-3	5.1	41
64	Importance of supersuperexchange interactions in determining the dimensionality of magnetic properties. Determination of strongly interacting spin exchange paths in A(2)Cu(PO(4))(2) (A = Ba, Sr), ACuP(2)O(7) (Ba, Ca, Sr, Pb), CaCuGe(2)O(6), and Cu(2)UO(2)(PO(4))(2) on the basis of qualitative spin dimer analysis. *Inorganic Chemistry*, **2005**, 44, 4359-65	5.1	40
63	Crystal structure, physical properties and electronic structure of a new organic conductor ?-(BEDT-TTF)2SF5CHFCF2SO3. *Journal of Materials Chemistry*, **2001**, 11, 2008-2013		40
62	Determination of the spin-lattice relevant for the quaternary magnetic oxide Bi4Cu3V2O14 on the basis of tight-binding and density functional calculations. *Inorganic Chemistry*, **2008**, 47, 4779-84	5.1	39
61	Investigation of the incommensurate and commensurate magnetic superstructures of LiCuVO4 and CuO on the basis of the isotropic spin exchange and classical spin approximations. *Inorganic Chemistry*, **2004**, 43, 4026-35	5.1	38

60	Spin dimer analysis of the anisotropic spin exchange interactions in the distorted wolframite-type oxides CuWO4, CuMoO4-III, and Cu(Mo(0.25)W0.75)O4. *Inorganic Chemistry*, **2001**, 40, 2161-9	5.1	38
59	Analysis of the spin exchange interactions in the three phases of vanadium pyrophosphate, (VO)2P2O7, in terms of spin-orbital interaction energy. *Inorganic Chemistry*, **2000**, 39, 3599-604	5.1	34
58	Importance of the O-M-O bridges (M = V5+, Mo6+) for the spin-exchange interactions in the magnetic oxides of Cu2+ ions bridged by MO4 tetrahedra: spin-lattice models of Rb2Cu2(MoO4)3, BaCu2V2O8, and KBa3Ca4Cu3V7O28. *Inorganic Chemistry*, **2006**, 45, 4440-7	5.1	29
57	On the nature of the spin frustration in the CuO2 ribbon chains of LiCuVO4: crystal structure determination at 1.6 K, magnetic susceptibility analysis, and density functional evaluation of the spin exchange constants. *Inorganic Chemistry*, **2011**, 50, 3582-8	5.1	28
56	Investigation of the spin exchange interactions and the magnetic structure of the high-temperature multiferroic CuBr2. *Physical Review B*, **2012**, 86,	3.3	24
55	Oxygen-Vacancy-Induced Midgap States Responsible for the Fluorescence and the Long-Lasting Phosphorescence of the Inverse Spinel Mg(Mg,Sn)O4. *Chemistry of Materials*, **2017**, 29, 1069-1075	9.6	23
54	Magnetic superstructures of cupric oxide CuO as ordered arrangements of one-dimensional antiferromagnetic chains. *Inorganic Chemistry*, **2003**, 42, 1187-92	5.1	23
53	Strongly correlated one-dimensional magnetic behavior of NiTa2O6. *Physical Review B*, **2014**, 89,	3.3	21
52	Spin dimer analysis of the magnetic structures of Ba3Cr2O8, Ba3Mn2O8, Na4FeO4, and Ba2CoO4 with a three-dimensional network of isolated MO4 (M = Cr, Mn, Fe, Co) tetrahedra. *Inorganic Chemistry*, **2006**, 45, 10743-9	5.1	21
51	Spin Dimer Analysis of the Spin Exchange Interactions of the Vanadium Oxides AV4O9 (A=Ca, Sr, Cs2, NH2(CH2)4NH2). *Journal of Solid State Chemistry*, **2000**, 153, 263-269	3.3	21
50	Most spin-1/2 transition-metal ions do have single ion anisotropy. *Journal of Chemical Physics*, **2014**, 141, 124113	3.9	20
49	A two-dimensional radical salt based upon BEDT-TTF and the dimeric, magnetic anion [Fe(tdas)2]22□(BEDT-TTF)2[Fe(tdas)2](tdas = 1,2,5-thiadiazole-3,4-dithiolate). *Journal of Materials Chemistry*, **2002**, 12, 3570-3577		20
48	Electronic and Structural Factors Controlling the Spin Orientations of Magnetic Ions. *Inorganic Chemistry*, **2019**, 58, 11854-11874	5.1	19
47	Investigation of the spin exchange interactions and magnetic Structures of the CrVO4-type transition metal phosphates, sulfates, and vanadates by spin dimer analysis. *Inorganic Chemistry*, **2003**, 42, 5932-7	5.1	19
46	Electron Counting Scheme Relevant for Late Transition Metal Compounds with Weakly Electronegative Ligands. Electronic Band Structure Study of Phosphosilicides PtSi3P2 and NiSi2P3□ *Inorganic Chemistry*, **1999**, 38, 340-345	5.1	19
45	Analysis of the spin exchange interactions of ferromagnetic CdVO3 in terms of first principles and qualitative electronic structure calculations. *Journal of Solid State Chemistry*, **2003**, 175, 341-347	3.3	18
44	Spin-Peierls distortions in TiPO4. *Physical Review B*, **2013**, 88,	3.3	13
43	Efficient Non-Catalytic Carboxylation of Diamines to Cyclic Ureas Using 2-Pyrrolidone as a Solvent and a Promoter. *Advanced Synthesis and Catalysis*, **2019**, 361, 297-306	5.6	13

42	Finite magnetization plateau from a two-dimensional antiferromagnet: density functional analysis of the magnetic structure of Cu3(P2O6OH)2. *Inorganic Chemistry*, **2010**, 49, 9253-6	5.1	12
41	Density functional investigation of the magnetic properties of PbMBO4 (M=Cr, Mn, Fe). *Solid State Communications*, **2009**, 149, 602-604	1.6	12
40	On the correct spin lattice for the spin-gapped magnetic solid NH4CuPO4H2O. *Journal of Solid State Chemistry*, **2008**, 181, 276-281	3.3	12
39	Structural and Magnetic Properties of the Trirutile-type 1D-Heisenberg Anti-Ferromagnet CuTaO. *Inorganic Chemistry*, **2017**, 56, 6318-6329	5.1	11
38	On Why the Two Polymorphs of NaFePO4 Exhibit Widely Different Magnetic Structures: Density Functional Analysis. *Inorganic Chemistry*, **2015**, 54, 4966-71	5.1	11
37	A Genuine Two-Dimensional Ising Ferromagnet with Magnetically Driven Re-entrant Transition. *Angewandte Chemie*, **2012**, 124, 11915-11919	3.6	11
36	Investigation of the Vanadyl Bond Ordering and Analysis of the Spin Exchange Interactions in Pb2V3O9 and Pb2As2VO9. *Chemistry of Materials*, **2008**, 20, 6929-6938	9.6	11
35	Spin exchange and magnetic dipole-dipole interactions leading to the magnetic superstructures of MAs2O6 (M = Mn, Co, Ni). *Inorganic Chemistry*, **2014**, 53, 3812-7	5.1	10
34	On the cause for the no spin-gap behavior of the triangular spin tube system CsCrF4. *Journal of Magnetism and Magnetic Materials*, **2012**, 324, 2806-2808	2.8	10
33	Density functional investigation of the magnetic superstructure of Cu2MnSnS4. *Solid State Communications*, **2012**, 152, 1683-1685	1.6	9
32	Crucial Role of Site Disorder and Frustration in Unusual Magnetic Properties of Quasi-2D Triangular Lattice Antimonate Na4FeSbO6. *Applied Magnetic Resonance*, **2015**, 46, 1121-1145	0.8	8
31	Spin dimer analysis of the magnetic structures of A2V3O9 (A=Ba, Sr) and Na9V14O35: Importance of the V4+O?OV4+ super-superexchange interactions mediated by the OV5+O bridges. *Solid State Sciences*, **2007**, 9, 824-832	3.4	8
30	Spin Exchanges Between Transition Metal Ions Governed by the Ligand p-Orbitals in Their Magnetic Orbitals. *Molecules*, **2021**, 26,	4.8	8
29	Synthesis and Characterization of Sodium-Iron Antimonate NaFeSbO: One-Dimensional Antiferromagnetic Chain Compound with a Spin-Glass Ground State. *Inorganic Chemistry*, **2019**, 58, 11333-11350	5.1	6
28	Spin dimer and mapping analyses of the magnetic properties of VO(CH3CO2)2 and VO(OCH2CH2O). *Solid State Sciences*, **2010**, 12, 685-690	3.4	6
27	Intralayer ferromagnetism between S=52 ions in MnBi2Te4: Role of empty Bi p states. *Physical Review B*, **2020**, 101,	3.3	6
26	Analysis of the magnetic structure of the manganese oxychalcogenides R2Mn2Se2O (R=LaO, BaF) by density functional calculations. *Journal of Magnetism and Magnetic Materials*, **2012**, 324, 3859-3862	2.8	5
25	Non-Idle-Spin Behavior and Field-Induced Magnetic Transitions of the Triple Chain Magnet Cu3(OH)4SO4. *Journal of the Physical Society of Japan*, **2012**, 81, 063704	1.5	5

24	Spin dimer analysis of the three-dimensional antiferromagnetic ordering in the quaternary manganese sulfides BaLn2MnS5 (Ln=La, Ce, Pr). *Journal of Solid State Chemistry*, **2002**, 169, 143-148	3.3	5
23	Analysis of Bonding and d-Electron Count in the Transition-Metal Carbides and Transition-Metal-Silicide Carbides with Discrete Linear M-C-M Units (M = Cr, Fe, Re) by Electronic Structure Calculations. *Inorganic Chemistry*, **1999**, 38, 2204-2210	5.1	5
22	On Ferro- and Antiferro-Spin-Density Waves Describing the Incommensurate Magnetic Structure of NaYNiWO. *Inorganic Chemistry*, **2020**, 59, 17856-17859	5.1	5
21	Comparison of the spin exchange interactions in PbCu2(PO4)2 and SrCu2(PO4)2 on the basis of spin dimer analysis. *Solid State Sciences*, **2007**, 9, 955-960	3.4	4
20	The Conceptual Dilemma of the One-Electron Picture in Describing the Uniaxial Magnetism at Linear Coordination Sites. *European Journal of Inorganic Chemistry*, **2019**, 2019, 2630-2634	2.3	3
19	On the long-range magnetic order and the preferred spin orientation of the layered magnetic oxides Sr2MnSi2O7 and Ba2MnGe2O7. *Solid State Communications*, **2012**, 152, 1116-1118	1.6	3
18	Density functional analysis of the magnetic structures of Sr2MGe2O7 (M=Mn, Co). *Journal of Magnetism and Magnetic Materials*, **2012**, 324, 3716-3718	2.8	3
17	Orbital Magnetic Moments of the High-Spin Co Ions at Axially-Elongated Octahedral Sites: Unquenched as Reported from Experiment or Quenched as Predicted by Theory?. *Inorganic Chemistry*, **2020**, 59, 18319-18324	5.1	2
16	Synthesis of the Elusive = / Star Structure: A Possible Quantum Spin Liquid Candidate. *Journal of the American Chemical Society*, **2020**, 142, 5013-5016	16.4	2
15	On the relevance of an antiferromagnetic dimer model for the spin-gapped magnetic solids Cu(terpy)Mo2O7 and Cu(OH)(p-pyc)H2O. *Inorganic Chemistry*, **2007**, 46, 2498-502	5.1	2
14	A copper-based 2D hybrid perovskite solar absorber as a potential eco-friendly alternative to lead halide perovskites. *Journal of Materials Chemistry C*,	7.1	2
13	Unusual Spin Exchanges Mediated by the Molecular Anion PS: Theoretical Analyses of the Magnetic Ground States, Magnetic Anisotropy and Spin Exchanges of MPS (M = Mn, Fe, Co, Ni). *Molecules*, **2021**, 26,	4.8	2
12	Group of Quantum Bits Acting as a Bit Using a Single-Domain Ferromagnet of Uniaxial Magnetic Ions. *ChemPhysChem*, **2017**, 18, 2147-2150	3.2	1
11	Effect of Nonmagnetic Ion Deficiency on Magnetic Structure: Density Functional Study of SrMnOCuTe, SrMOCuTe (M = Co, Mn), and the Oxide-Hydrides SrVOH, SrVOH, and SrVOH. *Inorganic Chemistry*, **2019**, 58, 14769-14776	5.1	1
10	Two-leg spin ladder model for Ag2VOP2O7 from mapping analysis based on first principles density functional calculations. *Solid State Communications*, **2009**, 149, 847-851	1.6	1
9	Nanosession: Mott Insulators and Transitions115-122		1
8	Factors Governing the Propagation Direction and Spin-Rotation Plane of Noncollinear Magnetic Structures: A Helix vs Cycloid in Doubly Ordered Perovskites NaYMnWO and NaYNiWO. *Inorganic Chemistry*, **2021**, 60, 15124-15127	5.1	0
7	Single-Domain Ferromagnet of Noncentrosymmetric Uniaxial Magnetic Ions and Magnetoelectric Interaction. *Angewandte Chemie - International Edition*, **2017**, 56, 10196-10199	16.4	

6	Density functional investigation of why Ba2BiFeS5 and Ba2SbFeS5 differ in their magnetic properties. *Journal of Magnetism and Magnetic Materials*, **2014**, 360, 152-156	2.8
5	Simultaneous presence of two different magnetic structures in a single-crystalline solid? Hydrogen-distribution-dependent magnetism. *Inorganic Chemistry*, **2014**, 53, 10800-2	5.1
4	Theoretical Analyses of Spin Exchange Interactions in Extended Magnetic Solids Containing Several Unpaired Spins per Spin Site. *Materials Research Society Symposia Proceedings*, **2000**, 658, 531	
3	Determination of Strongly Interacting Spin Exchange Path and Spin Lattice Model of (VO)2(H2O){O3P-(CH2)3-PO3}?2H2O on the Basis of Spin Dimer Analysis. *Bulletin of the Korean Chemical Society*, **2010**, 31, 1665-1668	1.2
2	Reply to Comment on Oxygen-Vacancy-Induced Midgap States Responsible for the Fluorescence and the Long-Lasting Phosphorescence of the Inverse Spinel Mg(Mg,Sn)O4 *Chemistry of Materials*, **2020**, 32, 7568-7568	9.6
1	Absence of Spin Frustration in the Kagom Layers of Cu2+ Ions in Volborthite Cu3V2O7(OH)2 2H2O and Observation of the Suppression and Re-Entrance of Specific Heat Anomalies in Volborthite under an External Magnetic Field. *Condensed Matter*, **2022**, 7, 24	1.8