

# Oleg Janson

## List of Publications by Citations

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56

papers

1,168

citations

21

h-index

32

g-index

60

ext. papers

1,416

ext. citations

4.3

avg, IF

4.28

L-index

#	Paper	IF	Citations
56	Multistep approach to microscopic models for frustrated quantum magnets: the case of the natural mineral azurite. <i>Physical Review Letters</i> , <b>2011</b> , 106, 217201	7.4	95
55	The quantum nature of skyrmions and half-skyrmions in Cu <sub>2</sub> OSeO <sub>3</sub> . <i>Nature Communications</i> , <b>2014</b> , 5, 5376	17.4	79
54	ECu <sub>2</sub> V <sub>2</sub> O <sub>7</sub> : A spin-12 honeycomb lattice system. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	74
53	Modified kagome physics in the natural spin-1/2 kagome lattice systems: kapellasite Cu <sub>3</sub> Zn(OH) <sub>6</sub> Cl <sub>2</sub> and haydeeite Cu <sub>3</sub> Mg(OH) <sub>6</sub> Cl <sub>2</sub> . <i>Physical Review Letters</i> , <b>2008</b> , 101, 106403	7.4	63
52	Nickelate superconductors—renaissance of the one-band Hubbard model. <i>Npj Quantum Materials</i> , <b>2020</b> , 5,	5	52
51	Bridging frustrated-spin-chain and spin-ladder physics: Quasi-one-dimensional magnetism of BiCu <sub>2</sub> PO <sub>6</sub> . <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	47
50	Quantum Anomalous Hall State in Ferromagnetic SrRuO <sub>3</sub> (111) Bilayers. <i>Physical Review Letters</i> , <b>2017</b> , 119, 026402	7.4	43
49	Coupled frustrated quantum spin-12 chains with orbital order in volborthite Cu <sub>3</sub> V <sub>2</sub> O <sub>7</sub> (OH) <sub>2</sub> ·2H <sub>2</sub> O. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	35
48	Spin gap in malachite Cu <sub>2</sub> (OH) <sub>2</sub> CO <sub>3</sub> and its evolution under pressure. <i>Physical Review B</i> , <b>2013</b> , 88,	3.3	34
47	Electronic structure and magnetic properties of the spin-1/2 Heisenberg system CuSe <sub>2</sub> O <sub>5</sub> . <i>New Journal of Physics</i> , <b>2009</b> , 11, 113034	2.9	34
46	CoBi <sub>3</sub> : a binary cobalt-bismuth compound and superconductor. <i>Angewandte Chemie - International Edition</i> , <b>2013</b> , 52, 9853-7	16.4	33
45	Magnetic Behavior of Volborthite Cu <sub>3</sub> V <sub>2</sub> O <sub>7</sub> (OH) <sub>2</sub> ·2H <sub>2</sub> O Determined by Coupled Trimers Rather than Frustrated Chains. <i>Physical Review Letters</i> , <b>2016</b> , 117, 037206	7.4	31
44	Crystal structures and variable magnetism of PbCu <sub>2</sub> (XO <sub>3</sub> ) <sub>2</sub> Cl <sub>2</sub> with X = Se, Te. <i>Dalton Transactions</i> , <b>2013</b> , 42, 9547-54	4.3	31
43	Long-range superexchange in Cu <sub>2</sub> A <sub>2</sub> O <sub>7</sub> (A= P, As, V) as a key element of the microscopic magnetic model. <i>Physical Review B</i> , <b>2011</b> , 83,	3.3	30
42	Large quantum fluctuations in the strongly coupled spin-12 chains of green diopside Cu <sub>6</sub> Si <sub>6</sub> O <sub>18</sub> ·6H <sub>2</sub> O. <i>Physical Review B</i> , <b>2010</b> , 82,	3.3	27
41	J1J <sub>2</sub> Heisenberg model at and close to its z=4 quantum critical point. <i>Physical Review B</i> , <b>2011</b> , 84,	3.3	25
40	Electronic structure and magnetic properties of the spin-1/2 Heisenberg magnet Bi <sub>2</sub> CuO <sub>4</sub> . <i>Physical Review B</i> , <b>2007</b> , 76,	3.3	25

39	Microscopic magnetic modeling for the $S=12$ alternating-chain compounds $\text{Na}_3\text{Cu}_2\text{SbO}_6$ and $\text{Na}_2\text{Cu}_2\text{TeO}_6$ . <i>Physical Review B</i> , <b>2014</b> , 89,	3-3	22
38	Crystal-water-induced switching of magnetically active orbitals in $\text{CuCl}_2$ . <i>Physical Review B</i> , <b>2009</b> , 79,	3-3	22
37	Magnetic properties of the low-dimensional spin-12 magnet $\text{ECu}_2\text{As}_2\text{O}_7$ . <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	21
36	Magnetic model for $\text{A}_2\text{CuP}_2\text{O}_7$ ( $\text{A}=\text{Na}, \text{Li}$ ): One-dimensional versus two-dimensional behavior. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	21
35	Decorated Shastry-Sutherland lattice in the spin-12 magnet $\text{CdCu}_2(\text{BO}_3)_2$ . <i>Physical Review B</i> , <b>2012</b> , 85,	3-3	20
34	Square-lattice magnetism of diabolite $\text{Pb}_2\text{Cu}(\text{OH})_4\text{Cl}_2$ . <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	20
33	Magnetism of $\text{CuX}_2$ frustrated chains ( $\text{X} = \text{F}, \text{Cl}, \text{Br}$ ): Role of covalency. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	18
32	Unusual ferromagnetic superexchange in $\text{CdVO}_3$ : The role of Cd. <i>Physical Review B</i> , <b>2011</b> , 84,	3-3	18
31	Magnetic anisotropy in the frustrated spin-chain compound $\text{MnVO}_4$ . <i>Physical Review B</i> , <b>2016</b> , 94,	3-3	18
30	Magnetization and spin dynamics of the spin $S=12$ hourglass nanomagnet $\text{Cu}_5(\text{OH})_2(\text{NIPA})_4 \cdot 10\text{H}_2\text{O}$ . <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	15
29	Two energy scales of spin dimers in clinoclase $\text{Cu}_3(\text{AsO}_4)(\text{OH})_3$ . <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	15
28	$\text{CoBi}_3$ --the first binary compound of cobalt with bismuth: high-pressure synthesis and superconductivity. <i>Journal of Physics Condensed Matter</i> , <b>2014</b> , 26, 395701	1.8	14
27	Consequences of critical interchain couplings and anisotropy on a Haldane chain. <i>Physical Review B</i> , <b>2015</b> , 91,	3-3	14
26	Antiferromagnetic spin-12 chains in $(\text{NO})\text{Cu}(\text{NO}_3)_3$ : A microscopic study. <i>Physical Review B</i> , <b>2010</b> , 82,	3-3	14
25	Intermetallic germanides with non-centrosymmetric structures derived from the $\text{Yb}_3\text{Rh}_4\text{Sn}_{13}$ type. <i>Dalton Transactions</i> , <b>2015</b> , 44, 5638-51	4-3	13
24	Nearly compensated exchange in the dimer compound callaghanite $\text{Cu}_2\text{Mg}_2(\text{CO}_3)(\text{OH})_6 \cdot 10\text{H}_2\text{O}$ . <i>Physical Review B</i> , <b>2014</b> , 89,	3-3	13
23	Frustrated spin chain physics near the Majumdar-Ghosh point in szenicsite $\text{Cu}_3(\text{MoO}_4)(\text{OH})_4$ . <i>Physical Review B</i> , <b>2017</b> , 95,	3-3	12
22	Structure and magnetism of $\text{Cr}_2[\text{BP}_3\text{O}_{12}]$ : Towards the quantum-classical crossover in a spin-32 alternating chain. <i>Physical Review B</i> , <b>2013</b> , 87,	3-3	11

21	Magnetic pyroxenes $\text{LiCrGe}_2\text{O}_6$ and $\text{LiCrSi}_2\text{O}_6$ : Dimensionality crossover in a nonfrustrated $S=32$ Heisenberg model. <i>Physical Review B</i> , <b>2014</b> , 90,	3-3	11
20	$\text{CaCu}_2(\text{SeO}_3)_2\text{Cl}_2$ : Spin-12 Heisenberg chain compound with complex frustrated interchain couplings. <i>Physical Review B</i> , <b>2011</b> , 83,	3-3	11
19	Electronic structure and magnetic properties of the spin-gap compound $\text{Cu}_2(\text{PO}_3)_2\text{CH}_2$ : Magnetic versus structural dimers. <i>Physical Review B</i> , <b>2010</b> , 81,	3-3	11
18	Operation Mechanism in Hybrid Mg-Li Batteries with $\text{TiNbO}$ Allowing Stable High-Rate Cycling. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 6309-6321	9-5	10
17	Intrinsic peculiarities of real material realizations of a spin-1/2 kagome lattice. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 145, 012008	0-3	9
16	Electronic structure and magnetic properties of $\text{Bi}_2\text{CuO}_4$ . <i>Physica C: Superconductivity and Its Applications</i> , <b>2007</b> , 460-462, 458-459	1-3	8
15	Short-range order of Br and three-dimensional magnetism in $(\text{CuBr})\text{LaNb}_2\text{O}_7$ . <i>Physical Review B</i> , <b>2012</b> , 85,	3-3	7
14	Electronic and magnetic state of $\text{LaMnO}_3$ epitaxially strained on $\text{SrTiO}_3$ : Effect of local correlation and nonlocal exchange. <i>Physical Review B</i> , <b>2019</b> , 100,	3-3	6
13	Anisotropic field-induced gap in the quasi-one-dimensional antiferromagnet $\text{KCuMoO}_4(\text{OH})$ . <i>Physical Review B</i> , <b>2017</b> , 96,	3-3	5
12	CuII materials—from crystal chemistry to magnetic model compounds. <i>Science and Technology of Advanced Materials</i> , <b>2007</b> , 8, 352-356	7-1	5
11	Finite-temperature phase diagram of (111) nickelate bilayers. <i>Physical Review B</i> , <b>2018</b> , 98,	3-3	5
10	Phase Diagram of Nickelate Superconductors Calculated by Dynamical Vertex Approximation. <i>Frontiers in Physics</i> , <b>2022</b> , 9,	3-9	4
9	Interplay of magnetic sublattices in langite $\text{Cu}_4(\text{OH})_6\text{SO}_4 \cdot 2\text{H}_2\text{O}$ . <i>New Journal of Physics</i> , <b>2016</b> , 18, 033020	3-3	4
8	Magnetoelastic couplings in the deformed kagome quantum spin lattice of volborthite. <i>Physical Review B</i> , <b>2019</b> , 99,	3-3	3
7	Electronic structure of $\text{KTi}(\text{SO}_4)_2 \cdot \text{H}_2\text{O}$ : An $S=12$ frustrated chain antiferromagnet. <i>Physical Review B</i> , <b>2013</b> , 88,	3-3	3
6	How correlations change the magnetic structure factor of the kagome Hubbard model. <i>Physical Review B</i> , <b>2021</b> , 104,	3-3	2
5	Frustration enhanced by Kitaev exchange in a $J=12$ triangular antiferromagnet. <i>Physical Review B</i> , <b>2021</b> , 104,	3-3	2
4	Ground state and low-temperature magnetism of the quasi-two-dimensional honeycomb compound $\text{InCu}_2\text{V}_3\text{V}_1/3\text{O}_3$ . <i>Physical Review B</i> , <b>2019</b> , 100,	3-3	1

- 3 Different types of spin currents in the comprehensive materials database of nonmagnetic spin Hall effect. *Npj Computational Materials*, **2021**, 7, 10.9 1
- 2 Ab initio based ligand field approach to determine electronic multiplet properties. *Physical Review B*, **2021**, 104, 3.3 1
- 1 Dynamical Mean Field Theory for Oxide Heterostructures. *Springer Series in Materials Science*, **2018**, 215-243 5