Taras Verkholyak

List of Publications by Year in descending order

48 papers	494 citations	687363 13 h-index	752698 20 g-index
48 all docs	48 docs citations	48 times ranked	249 citing authors

#	Article	IF	Citations
1	Fractional magnetization plateaux of a spin-1/2 Heisenberg model on the Shastry-Sutherland lattice: effect of quantum XY interdimer coupling. SciPost Physics, 2022, 12, .	4.9	3
2	Frustrated magnetism of spin- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml Heisenberg diamond and octahedral chains as a statistical mechanical monomer-dimer problem. Physical Review B, 2022, 105, .	3.2	5
3	Magnetization plateaus and bipartite entanglement of an exactly solved spin-1/2 Ising-Heisenberg orthogonal-dimer chain. Physica E: Low-Dimensional Systems and Nanostructures, 2021, 125, 114089.	2.7	7
4	Modified strong-coupling treatment of a spin- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml Heisenberg trimerized chain developed from the exactly solved Ising-Heisenberg diamond chain. Physical Review B, 2021, 103, .	3.2	6
5	Capacitive energy storage in single-file pores: Exactly solvable models and simulations. Journal of Chemical Physics, 2021, 155, 174112.	3.0	8
6	Enhanced magnetoelectric effect near a field-driven zero-temperature quantum phase transition of the spin-1/2 Heisenberg-Ising ladder. Physical Review E, 2020, 101, 012103.	2.1	6
7	Spin- <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></m XX chain in a transverse field with regularly alternating <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>g</mml:mi></mml:math> factors: Static and dynamic properties. Physical Review B, 2020, 102, .	3.2	2
8	Cluster-based Haldane phases, bound magnon crystals and quantum spin liquids of a mixed spin-1 and spin-1/2 Heisenberg octahedral chain. Physical Review B, 2019, 100, .	3.2	12
9	Magnetization process and low-temperature thermodynamics of a spin-1/2 Heisenberg octahedral chain. Physica B: Condensed Matter, 2018, 536, 364-368.	2.7	12
10	Spin-1/2 <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>X</mml:mi><mml:mi>Y</mml:mi></mml:mrow></mml:ma chain magnetoelectric: Effect of zigzag geometry. Physical Review B, 2018, 98, .	3.2	11
11	Realization of a spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></m anisotropic square lattice in a quasi-two-dimensional quantum antiferromagnet<mml:math		

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19	Magnetization process, bipartite entanglement, and enhanced magnetocaloric effect of the exactly solved spin-1/2 Ising-Heisenberg tetrahedral chain. Physical Review E, 2014, 89, 022143.	2.1	34
20	Exact solution for a quantum spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:math>Ising-Heisenberg orthogonal-dimer chain with Heisenberg intradimer and Ising interdimer interactions. Physical Review B, 2013, 88, .	3.2	19
21	Ground state of a spin-1/2 Heisenberg-Ising two-leg ladder with XYZ intra-rung coupling. Condensed Matter Physics, 2013, 16, 13601.	0.7	6
22	Quantum phase transitions in the exactly solved spin-1/2 Heisenbergâ€“Ising ladder. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 305001.	2.1	16
23	Effect of the on-site interaction on the magnetic properties of an exactly solvable spinâ€“electron system. Journal of Physics Condensed Matter, 2011, 23, 175602.	1.8	12
24	Magnetic properties of the quantum spin- $rac{1}{2}$ â€‰XX diamond chain: the Jordan-Wigner approach. European Physical Journal B, 2011, 80, 433-444.	1.5	11
25	Effect of On-Site Coulomb Repulsion on Phase Transitions in Exactly Solved Spin-Electron Model. Acta Physica Polonica A, 2010, 118, 942-943.	0.5	6
26	Spin-1/2 XXZ Diamond Chain within the Jordan-Wigner Fermionization Approach. Acta Physica Polonica A, 2010, 118, 978-979.	0.5	0
27	Spontaneous antiferromagnetic long-range order in the two-dimensional hybrid model of localized Ising spins and itinerant electrons. Physical Review B, 2009, 80, .	3.2	21
28	Deformable spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mstyle scriptlevel="1"><mml:mfrac bevelled="false"><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>X</mml:mi><mml:mi>X</mml:mi></mml:mrow></mml:math>chain with three-site interactions at zero and finite temperatures. Physical Review B, 2009, 79, .	3.2	10
29	Spin-1/2XXchain with three-site interactions: Spin-Peierls instability. Journal of Physics: Conference Series, 2009, 150, 042024.	0.4	0
30	Dynamic properties of the spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mstyle scriptlevel="1"><mml:mfrac bevelled="false"><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>X</mml:mi><mml:mi>Y</mml:mi></mml:mrow></mml:math>chain with three-site interactions. Physical Review B, 2008, 77, .	3.2	37
31	Spin-1/2 XX Chains with Three-Spin Interactions. Acta Physica Polonica A, 2008, 113, 437-440.	0.5	3
32	Dynamic Correlations in a Random Spin-1/2 XY Chain. Acta Physica Polonica A, 2008, 113, 441-444.	0.5	0
33	Dynamic properties of quantum spin chains: Simple route to complex behavior. Physical Review B, 2007, 76, .	3.2	15
34	Jordan-Wigner approach to the frustrated spin one-half XXZ chain. European Physical Journal B, 2006, 49, 283-287.	1.5	6
35	The effects of the symmetric and antisymmetric anisotropies on the dynamics of the spin- XY chain. Physica B: Condensed Matter, 2006, 378-380, 443-444.	2.7	10
36	Dynamic Structure Factors of the Spin-1/2XXChain with Dzyaloshinskiiâ€“Moriya Interaction. Journal of the Physical Society of Japan, 2006, 75, 104711.	1.6	6

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37	Dynamic probes of quantum spin chains with the Dzyaloshinskii-Moriya interaction. Physical Review B, 2006, 73, .	3.2	43
38	Dynamics of the spin- XY chain with Dzyaloshinskiiâ€“Moriya interaction. Physica B: Condensed Matter, 2005, 359-361, 1403-1405.	2.7	5
39	Effects of Dzyaloshinskii-Moriya Interaction in the Dynamics of s = 1/2 XX Chain. European Physical Journal D, 2004, 54, 531-534.	0.4	5
40	Square-lattice model and the Jordanâ€“Wigner fermions: the ground-state and thermodynamic properties. Physica A: Statistical Mechanics and Its Applications, 2003, 320, 407-428.	2.6	5
41	Dielectric, piezoelectric, and elastic properties of the Rochelle saltNaKC4H4O6â‹…4H2O:â€,A theory. Physical Review B, 2003, 67, .	3.2	33
42	2D quantum spin models and Jordan-Wigner fermions. European Physical Journal D, 2002, 52, A41-A44.	0.4	2
43	Effective Field Method for Ising Model with Arbitrary Ferromagnetic Interaction. Physica Status Solidi (B): Basic Research, 1999, 211, 759-769.	1.5	2
44	One exactly solvable random spin-1/2â€‰XY chain. Low Temperature Physics, 1997, 23, 733-737.	0.6	3
45	Thermodynamics and spin correlations for an Ising chain in a random transverse field. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1997, 76, 855-858.	0.6	1
46	One exactly solvable magnetic chain with quenched randomness. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 226-228, 745-748.	5.6	0
47	Thermodynamical and dynamical properties of quenched quantum spin chains. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1997, 226-228, 1049-1052.	5.6	1
48	Thermodynamical properties of a random spin-1/2 XY chain with Dzyaloshinskiiâ€”Moriya interactions. Journal of Magnetism and Magnetic Materials, 1996, 157-158, 421-423.	2.3	10