Jasper van Wezel

List of Publications by Year in descending order

77 papers	2,625 citations	257450 24 h-index	189892 50 g-index
77 all docs	77 docs citations	77 times ranked	3149 citing authors

#	Article	IF	Citations
1	Topological Classification of Crystalline Insulators through Band Structure Combinatorics. Physical Review X, 2017, 7, .	8.9	437
2	Signatures of exciton condensation in a transition metal dichalcogenide. Science, 2017, 358, 1314-1317.	12.6	307
3	Observation of non-Hermitian topology and its bulkâ€“edge correspondence in an active mechanical metamaterial. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29561-29568.	7.1	294
4	Quantum phase transition from triangular to stripe charge order in NbSe ₂. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1623-1627.	7.1	145
5	Emergence of coherence in the charge-density wave state of 2H-NbSe2. Nature Communications, 2015, 6, 6313.	12.8	123
6	Exciton-phonon-driven charge density wave in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>TiSe</mml:mtext></mml:mrow><mml:mn>2</mml:mn></mml:ms Physical Review B, 2010, 81, .	3.2	122
7	Charge order from orbital-dependent coupling evidenced by NbSe2. Nature Communications, 2015, 6, 7034.	12.8	78
8	Order parameter fluctuations at a buried quantum critical point. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7224-7229.	7.1	59
9	An introduction to spontaneous symmetry breaking. SciPost Physics Lecture Notes, 0, , .	0.0	59
10	An alternative interpretation of recent ARPES measurements on TiSe 2. Europhysics Letters, 2010, 89, 47004.	2.0	52
11	Effect of Charge Order on the Plasmon Dispersion in Transition-Metal Dichalcogenides. Physical Review Letters, 2011, 107, 176404.	7.8	50
12	Chirality and orbital order in charge density waves. Europhysics Letters, 2011, 96, 67011.	2.0	49
13	Chiral Phase Transition in Charge Ordered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:msub><mml:mi>TiSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review Letters, 2013, 110, 196404.	7.8	49
14	Atomic-scale strain manipulation of a charge density wave. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6986-6990.	7.1	47
15	An Intrinsic Limit to Quantum Coherence due to Spontaneous Symmetry Breaking. Physical Review Letters, 2005, 94, 230401.	7.8	41
16	Excitonic and lattice contributions to the charge density wave in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi><mml:mo>â^'</mml:mo><mml:m mathvariant="normal">e</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> revealed by a phonon bottleneck. Physical Review Research, 2019, 1, .	3.6	39
17	Topology and broken Hermiticity. Nature Physics, 2021, 17, 9-13.	16.7	38
18	Itinerant density wave instabilities at classical and quantum critical points. Nature Physics, 2015, 11, 865-871.	16.7	31

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19	Charge order in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="bold">NbSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2016, 94, .	3.2	31
20	Spontaneous symmetry breaking in quantum mechanics. American Journal of Physics, 2007, 75, 635-638.	0.7	29
21	Incommensurate antiferromagnetism in a pure spin system via cooperative organization of local and itinerant moments. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3287-3292.	7.1	29
22	Relation between decoherence and spontaneous symmetry breaking in many-particle qubits. Physical Review B, 2006, 74, .	3.2	28
23	Electronic structure of the candidate 2D Dirac semimetal SrMnSb2: a combined experimental and theoretical study. SciPost Physics, 2018, 4, .	4.9	28
24	Chiral symmetry breaking and charge order. Physics Magazine, 2010, 3, .	0.1	26
25	Superconductivity and hybrid soft modes in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Ti</mml:mi><mml:msub><mml:mi>Se2</mml:mi></mml:msub></mml:mrow></mml:math>. Physical Review B, 2016, 94, .	3.2	26
26	Exciton-phonon interactions and superconductivity bordering charge order in TiSe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>. Physical Review B, 2011, 83, .	3.2	25
27	Emergence of long-range order in sheets of magnetic dimers. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14372-14377.	7.1	23
28	Quantum dynamics in the thermodynamic limit. Physical Review B, 2008, 78, .	3.2	20
29	Multiband charge density wave exposed in a transition metal dichalcogenide. Nature Communications, 2021, 12, 6037.	12.8	20
30	Polar charge and orbital order in2H-TaS2. Physical Review B, 2012, 85, .	3.2	19
31	Spontaneous symmetry breaking and decoherence in superconductors. Physical Review B, 2008, 77, .	3.2	18
32	Orbital selectivity causing anisotropy and particle-hole asymmetry in the charge density wave gap of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi><mml:mtext>â^'</mml:mtext></mml:mrow></mml:math>. Physical Review B, 2017, 96, .	3.2	18
33	A nanoscale experiment measuring gravity's role in breaking the unitarity of quantum dynamics. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 35-56.	2.1	17
34	Towards an experimental test of gravity-induced quantum state reduction. Philosophical Magazine, 2008, 88, 1005-1026.	1.6	15
35	Orbital-assisted Peierls state in NaTiSi 2 O 6. Europhysics Letters, 2006, 75, 957-963.	2.0	13
36	Broken Time Translation Symmetry as a Model for Quantum State Reduction. Symmetry, 2010, 2, 582-608.	2.2	13

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37	Pressure tuning of competing magnetic interactions in intermetallic CeFe<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2012, 86, .	3.2	13
38	Topology in time-reversal symmetric crystals. Physical Review B, 2019, 100, .	3.2	13
39	Synthetic gravitational horizons in low-dimensional quantum matter. Physical Review Research, 2021, 3, .	3.6	13
40	Quasi one-dimensional chains and exciton-phonon interactions in TiSe2. Physica Status Solidi (B): Basic Research, 2010, 247, 592-594.	1.5	12
41	Quasiperiodicity and 2D topology in 1D charge-ordered materials. Europhysics Letters, 2015, 111, 37008.	2.0	11
42	Charge order from structured coupling in VSe$_2$. SciPost Physics, 2020, 9, .	4.9	11
43	Coexisting Charge-Ordered States with Distinct Driving Mechanisms in Monolayer VSe₂. ACS Nano, 2022, 16, 783-791.	14.6	11
44	The SchrÃ¶dingerâ€“Newton equation as a possible generator of quantum state reduction. Philosophical Magazine, 2008, 88, 1659-1671.	1.6	10
45	Charge ordering geometries in uniaxially strained<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NbSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2015, 92, .	3.2	10
46	Optical gyrotropy and the nonlocal Hall effect in chiral charge-ordered<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>TiSe</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math> Physical Review B, 2015, 92, .	3.2	9
47	Elemental chalcogens as a minimal model for combined charge and orbital order. Physical Review B, 2018, 97, .	3.2	9
48	Prerequisites for chiral charge order. Physica B: Condensed Matter, 2012, 407, 1779-1782.	2.7	7
49	One-Dimensional Quasicrystals from Incommensurate Charge Order. Physical Review Letters, 2015, 115, 236401.	7.8	7
50	Investigation of the non-equilibrium state of strongly correlated materials by complementary ultrafast spectroscopy techniques. New Journal of Physics, 2021, 23, 033025.	2.9	7
51	The simple-cubic structure of elemental Polonium and its relation to combined charge and orbital order in other elemental chalcogens. SciPost Physics, 2018, 4, .	4.9	7
52	Inconsistency of linear dynamics and Born's rule. Physical Review A, 2021, 104, .	2.5	7
53	Comment on â€œCharge-parity symmetry observed through Friedel oscillations in chiral charge-density wavesâ€• Physical Review B, 2012, 86, .	3.2	5
54	An introduction to kinks in $varphi^4$-theory. SciPost Physics Lecture Notes, 0, , .	0.0	5

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55	â€“Peierls transition in the spin chains of <mml:math altimg="si9.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://. Journal of Magnetic	2.3	4
56	Thin spectrum states in bulk superconductors and superconducting grains. Physica B: Condensed Matter, 2008, 403, 3206-3210.	2.7	4
57	Engineering spectral properties of non-interacting lattice Hamiltonians. SciPost Physics, 2021, 11, .	4.9	4
58	Limit to manipulation of qubits due to spontaneous symmetry breaking. Journal of Magnetism and Magnetic Materials, 2007, 310, e503-e505.	2.3	3
59	Rosenkranz, Osborn, and Van Wezel Reply:. Physical Review Letters, 2019, 122, 229702.	7.8	3
60	Conditions for superdecoherence. Quantum - the Open Journal for Quantum Science, 0, 4, 265.	0.0	3
61	Dephasing caused by the Thin Spectrum in a BCS Superconductor. AIP Conference Proceedings, 2007, , .	0.4	2
62	Visualizing the connection between edge states and the mobility edge in adiabatic and nonadiabatic topological charge transport. Physical Review B, 2019, 99, .	3.2	2
63	Chalcogenic orbital density waves in the weak- and strong-coupling limit. Physical Review B, 2021, 103, .	3.2	2
64	Emergence of oscillons in kink-impurity interactions. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 315701.	2.1	2
65	Signatures of the charge density wave collective mode in the infrared optical response of VSe2. Physical Review B, 2021, 104, .	3.2	2
66	Kinks and realistic impurity models in Ï†4-theory. International Journal of Modern Physics B, 2022, 36, .	2.0	2
67	Observing the spontaneous breakdown of unitarity. Journal of Physics: Conference Series, 2009, 150, 042225.	0.4	1
68	The chiral charge density wave transition in1T-TiSe₂. Journal of Physics: Conference Series, 2012, 391, 012167.	0.4	1
69	Observing the Chiral Charge Ordering Transition in TiSe₂. Advances in Science and Technology, 0, , .	0.2	1
70	An instability of unitary quantum dynamics. Journal of Physics: Conference Series, 2015, 626, 012012.	0.4	1
71	Reply to Zayed: Interplay of magnetism and structure in the Shastryâ€“Sutherland model. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E383-E384.	7.1	1
72	Topological states between inversion symmetric atomic insulators. SciPost Physics, 2021, 10, .	4.9	1

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73	Stability and absence of a tower of states in ferrimagnets. Physical Review Research, 2020, 2, .	3.6	1
74	Orbital Driven Spin Ordering in the One Dimensional Chains of Titanium Pyroxene. AIP Conference Proceedings, 2006, , .	0.4	0
75	Charge-density-wave in 1T-TiSe2: exciton-phonon separation by femtosecond valence band dynamics. EPJ Web of Conferences, 2019, 205, 04008.	0.3	0
76	Visualizing topological transport. American Journal of Physics, 2020, 88, 876-882.	0.7	0
77	Topological invariants of rotationally symmetric crystals. Physical Review B, 2021, 104, .	3.2	0