

# Jasper van Wezel

## List of Publications by Year in descending order

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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	Kinks and realistic impurity models in $\mathbb{Z}_2$ -theory. International Journal of Modern Physics B, 2022, 36, .	2.0	2
2	Coexisting Charge-Ordered States with Distinct Driving Mechanisms in Monolayer $\text{VSe}_2$ . ACS Nano, 2022, 16, 783-791.	14.6	11
3	Topology and broken Hermiticity. Nature Physics, 2021, 17, 9-13.	16.7	38
4	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
5	Synthetic gravitational horizons in low-dimensional quantum matter. Physical Review Research, 2021, 3, .	3.6	13
6	Topological states between inversion symmetric atomic insulators. SciPost Physics, 2021, 10, .	4.9	1
7	Chalcogenic orbital density waves in the weak- and strong-coupling limit. Physical Review B, 2021, 103, .	3.2	2
8	Emergence of oscillons in kink-impurity interactions. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 315701.	2.1	2
9	Signatures of the charge density wave collective mode in the infrared optical response of $\text{VSe}_2$ . Physical Review B, 2021, 104, .	3.2	2
10	Multiband charge density wave exposed in a transition metal dichalcogenide. Nature Communications, 2021, 12, 6037.	12.8	20
11	Topological invariants of rotationally symmetric crystals. Physical Review B, 2021, 104, .	3.2	0
12	Inconsistency of linear dynamics and Born's rule. Physical Review A, 2021, 104, .	2.5	7
13	Engineering spectral properties of non-interacting lattice Hamiltonians. SciPost Physics, 2021, 11, .	4.9	4
14	Observation of non-Hermitian topology and its bulk-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
15	Visualizing topological transport. American Journal of Physics, 2020, 88, 876-882.	0.7	0
16	Stability and absence of a tower of states in ferrimagnets. Physical Review Research, 2020, 2, .	3.6	1
17	Charge order from structured coupling in $\text{VSe}_2$ . SciPost Physics, 2020, 9, .	4.9	11
18	Topology in time-reversal symmetric crystals. Physical Review B, 2019, 100, .	3.2	13

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19	Rosenkranz, Osborn, and Van Wezel Reply: Physical Review Letters, 2019, 122, 229702.	7.8	3
20	Charge-density-wave in 1T-TiSe2: exciton-phonon separation by femtosecond valence band dynamics. EPJ Web of Conferences, 2019, 205, 04008.	0.3	0
21	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
22	Excitonic and lattice contributions to the charge density wave in $1T\text{-TiSe}_2$ revealed by a phonon bottleneck. Physical Review Research, 2019, 1, .	3.6	39
23	Elemental chalcogens as a minimal model for combined charge and orbital order. Physical Review B, 2018, 97, .	3.2	9
24	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
25	Electronic structure of the candidate 2D Dirac semimetal SrMnSb2: a combined experimental and theoretical study. SciPost Physics, 2018, 4, .	4.9	28
26	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
27	Orbital selectivity causing anisotropy and particle-hole asymmetry in the charge density wave gap of $2\text{-HfTe}_2$ . Physical Review B, 2017, 96, .	3.2	18
28	Signatures of exciton condensation in a transition metal dichalcogenide. Science, 2017, 358, 1314-1317.	12.6	307
29	Topological Classification of Crystalline Insulators through Band Structure Combinatorics. Physical Review X, 2017, 7, .	8.9	437
30	Superconductivity and hybrid soft modes in $\text{TiSe}_2$ . Physical Review B, 2016, 94, .	3.2	26
31	Charge order in $2\text{-NbSe}_2$ . Physical Review B, 2016, 94, .	3.2	31
32	Optical gyrotropy and the nonlocal Hall effect in chiral charge-ordered $2\text{-TiSe}_2$ . Physical Review B, 2015, 92, .	3.2	9
33	Charge ordering geometries in uniaxially strained $2\text{-NbSe}_2$ . Physical Review B, 2015, 92, .	3.2	10
34	One-Dimensional Quasicrystals from Incommensurate Charge Order. Physical Review Letters, 2015, 115, 236401.	7.8	7
35	An instability of unitary quantum dynamics. Journal of Physics: Conference Series, 2015, 626, 012012.	0.4	1
36	Reply to Zayed: Interplay of magnetism and structure in the Shastry-Sutherland model. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E383-E384.	7.1	1

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37	Emergence of coherence in the charge-density wave state of 2H-NbSe <sub>2</sub> . Nature Communications, 2015, 6, 6313.	12.8	123
38	Itinerant density wave instabilities at classical and quantum critical points. Nature Physics, 2015, 11, 865-871.	16.7	31
39	Charge order from orbital-dependent coupling evidenced by NbSe <sub>2</sub> . Nature Communications, 2015, 6, 7034.	12.8	78
40	Quasiperiodicity and 2D topology in 1D charge-ordered materials. Europhysics Letters, 2015, 111, 37008.	2.0	11
41	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
42	Quantum phase transition from triangular to stripe charge order in NbSe <sub>2</sub> . Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1623-1627.	7.1	145
43	Chiral Phase Transition in Charge Ordered $T\text{-TiSe}_2$ . Physical Review Letters, 2013, 110, 186404.	7.8	49
44	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
45	The chiral charge density wave transition in $T\text{-TiSe}_2$ . Journal of Physics: Conference Series, 2012, 391, 012167.	0.4	1
46	Comment on "Charge-parity symmetry observed through Friedel oscillations in chiral charge-density waves". Physical Review B, 2012, 86, .	3.2	5
47	Pressure tuning of competing magnetic interactions in intermetallic CeFe <sub>2</sub> . Physical Review B, 2012, 86, .	3.2	13
48	Polar charge and orbital order in 2H-TaS <sub>2</sub> . Physical Review B, 2012, 85, .	3.2	19
49	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
50	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
51	Prerequisites for chiral charge order. Physica B: Condensed Matter, 2012, 407, 1779-1782.	2.7	7
52	Exciton-phonon interactions and superconductivity bordering charge order in TiSe <sub>2</sub> . Physical Review B, 2011, 83, .	3.2	25
53	Effect of Charge Order on the Plasmon Dispersion in Transition-Metal Dichalcogenides. Physical Review Letters, 2011, 107, 176404.	7.8	50
54	Chirality and orbital order in charge density waves. Europhysics Letters, 2011, 96, 67011.	2.0	49

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55	Chiral symmetry breaking and charge order. Physics Magazine, 2010, 3, .	0.1	26
56	Quasi one-dimensional chains and exciton-phonon interactions in TiSe <sub>2</sub> . Physica Status Solidi (B): Basic Research, 2010, 247, 592-594.	1.5	12
57	Broken Time Translation Symmetry as a Model for Quantum State Reduction. Symmetry, 2010, 2, 582-608.	2.2	13
58	An alternative interpretation of recent ARPES measurements on TiSe <sub>2</sub> . Europhysics Letters, 2010, 89, 47004.	2.0	52
59	Exciton-phonon-driven charge density wave in $\text{TiSe}_2$ . Physical Review B, 2010, 81, .	3.2	122
60	Observing the spontaneous breakdown of unitarity. Journal of Physics: Conference Series, 2009, 150, 042225.	0.4	1
61	Thin spectrum states in bulk superconductors and superconducting grains. Physica B: Condensed Matter, 2008, 403, 3206-3210.	2.7	4
62	Towards an experimental test of gravity-induced quantum state reduction. Philosophical Magazine, 2008, 88, 1005-1026.	1.6	15
63	Spontaneous symmetry breaking and decoherence in superconductors. Physical Review B, 2008, 77, .	3.2	18
64	The Schrödinger-Newton equation as a possible generator of quantum state reduction. Philosophical Magazine, 2008, 88, 1659-1671.	1.6	10
65	Quantum dynamics in the thermodynamic limit. Physical Review B, 2008, 78, .	3.2	20
66	Spontaneous symmetry breaking in quantum mechanics. American Journal of Physics, 2007, 75, 635-638.	0.7	29
67	Dephasing caused by the Thin Spectrum in a BCS Superconductor. AIP Conference Proceedings, 2007, , .	0.4	2
68	Limit to manipulation of qubits due to spontaneous symmetry breaking. Journal of Magnetism and Magnetic Materials, 2007, 310, e503-e505.	2.3	3
69	Orbital Driven Spin Ordering in the One Dimensional Chains of Titanium Pyroxene. AIP Conference Proceedings, 2006, , .	0.4	0
70	Relation between decoherence and spontaneous symmetry breaking in many-particle qubits. Physical Review B, 2006, 74, .	3.2	28
71	Orbital-assisted Peierls state in NaTiSi <sub>2</sub> O <sub>6</sub> . Europhysics Letters, 2006, 75, 957-963.	2.0	13
72	Orbital- $\pi$ Peierls transition in the spin chains of $\text{NaTiSi}_2\text{O}_6$ . Journal of Magnetism and Magnetic Materials, 2006, 309, e503-e505.	2.3	4

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73	An Intrinsic Limit to Quantum Coherence due to Spontaneous Symmetry Breaking. Physical Review Letters, 2005, 94, 230401.	7.8	41
74	Observing the Chiral Charge Ordering Transition in $\text{TiSe}_2$ . Advances in Science and Technology, 0, , .	0.2	1
75	An introduction to kinks in $\varphi^4$ -theory. SciPost Physics Lecture Notes, 0, , .	0.0	5
76	An introduction to spontaneous symmetry breaking. SciPost Physics Lecture Notes, 0, , .	0.0	59
77	Conditions for superdecoherence. Quantum - the Open Journal for Quantum Science, 0, 4, 265.	0.0	3