

# Jan M Tomczak

## List of Publications by Year in descending order

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Version: 2024-02-01

51  
papers

1,967  
citations

186265

28  
h-index

243625

44  
g-index

52  
all docs

52  
docs citations

52  
times ranked

2241  
citing authors

#	ARTICLE	IF	CITATIONS
1	Continued crystal field splitting and orbital-selective coherence induced by strong correlations in $\langle \mathbb{V} \rangle$ . $\langle \mathbb{O} \rangle$ . Physical Review Letters, 2020, 124, 166402.	3.2	129
2	Topotactic Hydrogen in Nickelate Superconductors and Akin Infinite-Layer Oxides. Physical Review Letters, 2020, 124, 166402.	7.8	102
3	Large Seebeck effect by charge-mobility engineering. Nature Communications, 2015, 6, 7475.	12.8	94
4	Signatures of electronic correlations in iron silicide. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3243-3246.	7.1	86
5	Combined GW and dynamical mean-field theory: Dynamical screening effects in transition metal oxides. Europhysics Letters, 2012, 100, 67001.	2.0	86
6	Optical properties of correlated materials: Generalized Peierls approach and its application to $\langle \mathbb{V} \rangle$ . Physical Review B, 2009, 80, .	3.2	81
7	Many-Body Effects in Iron Pnictides and Chalcogenides: Nonlocal Versus Dynamic Origin of Effective Masses. Physical Review Letters, 2012, 109, 237010.	7.8	81
8	Thermopower of correlated semiconductors: Application to $\langle \mathbb{V} \rangle$ . Physical Review B, 2010, 82, .	3.2	80
9	Electronics with Correlated Oxides: $\langle \mathbb{V} \rangle$ . Physical Review Letters, 2015, 114, 246401.	7.8	77
10	Infrared properties of electron-doped cuprates: Tracking normal-state gaps and quantum critical behavior in $\text{Pr}_{2-x}\text{Ce}_x\text{CuO}_4$ . Europhysics Letters, 2005, 70, 225-231.	2.0	76
11	Effective bandstructure in the insulating phase versus strong dynamical correlations in metallic $\langle \mathbb{V} \rangle$ . Physical Review B, 2008, 78, .	3.2	76
12	Asymmetry in band widening and quasiparticle lifetimes in $\langle \mathbb{V} \rangle$ : Competition between screened exchange and local correlations from combined dynamical mean-field theory. Physical Review B, 2017, 95, .	3.2	74
13	$\langle \mathbb{V} \rangle$ dynamical vertex approximation. Physical Review B, 2017, 95, .	3.2	64
14	Thermoelectricity in correlated narrow-gap semiconductors. Journal of Physics Condensed Matter, 2018, 30, 183001.	1.8	58
15	Dynamical Correlations and Screened Exchange on the Experimental Bench: Spectral Properties of the Cobalt Pnictide $\langle \mathbb{V} \rangle$ . Physical Review Letters, 2014, 113, 266403.	7.8	50
16	Effective band structure of correlated materials: the case of $\langle \mathbb{V} \rangle$ . Journal of Physics Condensed Matter, 2007, 19, 365206.	1.8	48
17	Merging GW with DMFT and non-local correlations beyond. European Physical Journal: Special Topics, 2017, 226, 2565-2590.	2.6	45
18	Rare-earth vs. heavy metal pigments and their colors from first principles. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 904-907.	7.1	43

#	ARTICLE	IF	CITATIONS
19	Route to room-temperature ferromagnetic ultrathin SrRuO <sub>3</sub> films. Physical Review B, 2015, 92, .	3.2	41
20	Downfolded Self-Energy of Many-Electron Systems. Physical Review Letters, 2009, 102, 176402.	7.8	37
21	Unified Picture for the Colossal Thermopower Compound $\text{FeSb}_2$ . Physical Review Letters, 2015, 114, 236603.	7.8	36
22	Strain-engineering Mott-insulating La <sub>2</sub> CuO <sub>4</sub> . Nature Communications, 2019, 10, 786.	12.8	35
23	Realistic many-body models for manganese monoxide under pressure. Physical Review B, 2010, 81, .	3.2	33
24	Optical properties of correlated materials – Or why intelligent windows may look dirty. Physica Status Solidi (B): Basic Research, 2009, 246, 1996-2005.	1.5	32
25	Materials design using correlated oxides: Optical properties of vanadium dioxide. Europhysics Letters, 2009, 86, 37004.	2.0	32
26	Separability of dynamical and nonlocal correlations in three dimensions. Physical Review B, 2015, 91, .	3.2	31
27	Electronic correlations in $\text{Fe}_3\text{CaMn}_2\text{Sb}_5$ : the effect of hole doping on its magnetic properties. Physical Review B, 2014, 89, .	3.2	30
28	Multi-orbital effects in optical properties of vanadium sesquioxide. Journal of Physics Condensed Matter, 2009, 21, 064209.	1.8	29
29	Highly dispersive electron relaxation and colossal thermoelectricity in the correlated semiconductor FeSb. Physical Review B, 2013, 88, .	3.2	28
30	QS <i>GW</i> +DMFT: an electronic structure scheme for the iron pnictides and beyond. Journal of Physics: Conference Series, 2015, 592, 012055.	0.4	26
31	Effective Coulomb interactions in solids under pressure. Physical Review B, 2009, 79, .	3.2	25
32	Phase Diagram of Nickelate Superconductors Calculated by Dynamical Vertex Approximation. Frontiers in Physics, 2022, 9, .	2.1	24
33	Realizing double Dirac particles in the presence of electronic interactions. Physical Review B, 2017, 96, .	3.2	23
34	Towards ab initio Calculations with the Dynamical Vertex Approximation. Journal of the Physical Society of Japan, 2018, 87, 041004.	1.6	18
35	Strain-induced tuning of the electronic Coulomb interaction in $\text{d}_{3/2}$ transition metal oxide perovskites. Physical Review B, 2018, 98, .	3.2	18
36	Resistivity saturation in Kondo insulators. Communications Physics, 2021, 4, .	5.3	12

#	ARTICLE	IF	CITATIONS
37	The AbinitioD <sup>2</sup> A Project v1.0: Non-local correlations beyond and susceptibilities within dynamical mean-field theory. Computer Physics Communications, 2019, 245, 106847.	7.5	11
38	Isoelectronic tuning of heavy fermion systems: Proposal to synthesize Ce3Sb4Pd3. Physical Review B, 2020, 101, .	3.2	11
39	Protected Fe valence in quasi-two-dimensional $\text{FeSi}_2$ . Journal of Physics Condensed Matter, 2015, 27, 175601.	1.8	9
40	Constraints on the total coupling strength to bosons in the iron based superconductors. Physica Status Solidi (B): Basic Research, 2017, 254, 1700006.	1.5	8
41	Designing a mechanically driven spin-crossover molecular switch via organic embedding. Nanoscale Advances, 2021, 3, 4990-4995.	4.6	8
42	Anisotropy of electronic correlations: On the applicability of local theories to layered materials. Physical Review B, 2021, 103, .	3.2	8
43	Mass Enhancements and Band Shifts in Strongly Hole-Overdoped Fe-Based Pnictide Superconductors: $\text{KFe}_2\text{As}_2$ and $\text{CsFe}_2\text{As}_2$ . Journal of Superconductivity and Novel Magnetism, 2018, 31, 777-783.	1.8	6
44	Breaking of Thermopower-Conductivity Trade-Off in $\text{LaTiO}_3$ Film around Mott Insulator to Metal Transition. Advanced Science, 2021, 8, 2102097.	11.2	6
45	Large phonon drag thermopower boosted by massive electrons and phonon leaking in $\text{LaAlO}_3/\text{LaNiO}_3/\text{LaAlO}_3$ heterostructure. Nano Letters, 2021, 21, 9240-9246.	9.1	6
46	Prototypical many-body signatures in transport properties of semiconductors. Physical Review B, 2022, 105, .	3.2	6
47	Momentum-resolved spectroscopy of correlated metals: A view from dynamical mean field theory. Comptes Rendus Physique, 2009, 10, 537-547.	0.9	5
48	Zoology of spin and orbital fluctuations in ultrathin oxide films. Physical Review B, 2021, 104, .	3.2	5
49	Toward Functionalized Ultrathin Oxide Films: The Impact of Surface Apical Oxygen. Advanced Electronic Materials, 2022, 8, .	5.1	5
50	Hidden one-dimensional, strongly nested, and almost half-filled Fermi surface in $\text{Ba}_{1-x}\text{K}_x\text{Fe}_2\text{As}_2$ superconductors. Physical Review B, 2022, 105, .		
51	Pitfalls and solutions for perovskite transparent conductors. Physical Review B, 2021, 104, .	3.2	2