CÃ©dric R Weber

List of Publications by Year
in descending order

69 papers	2,619 citations	218677 26 h-index	214800 47 g-index
75 all docs	75 docs citations	75 times ranked	2916 citing authors

#	Article	IF	Citations
1	Systems Analysis Reveals High Genetic and Antigen-Driven Predetermination of Antibody Repertoires throughout B Cell Development. Cell Reports, 2017, 19, 1467-1478.	6.4	172
2	Computational Strategies for Dissecting the High-Dimensional Complexity of Adaptive Immune Repertoires. Frontiers in Immunology, 2018, 9, 224.	4.8	164
3	Vanadium Dioxide: A Peierls-Mott Insulator Stable against Disorder. Physical Review Letters, 2012, 108, 256402.	7.8	156
4	Optimization of therapeutic antibodies by predicting antigen specificity from antibody sequence via deep learning. Nature Biomedical Engineering, 2021, 5, 600-612.	22.5	156
5	Strength of correlations in electron- and hole-doped cuprates. Nature Physics, 2010, 6, 574-578.	16.7	142
6	Learning the High-Dimensional Immunogenomic Features That Predict Public and Private Antibody Repertoires. Journal of Immunology, 2017, 199, 2985-2997.	0.8	124
7	A compact vocabulary of paratope-epitope interactions enables predictability of antibody-antigen binding. Cell Reports, 2021, 34, 108856.	6.4	101
8	Orbital Currents in Extended Hubbard Models of High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:math>Cuprate Superconductors. Physical Review Letters, 2009, 102, 017005.	7.8	99
9	Apical oxygens and correlation strength in electron- and hole-doped copper oxides. Physical Review B, 2010, 82, .	3.2	90
10	Ising Transition Driven by Frustration in a 2D Classical Model with Continuous Symmetry. Physical Review Letters, 2003, 91, 177202.	7.8	87
11	Scaling of the transition temperature of hole-doped cuprate superconductors with the charge-transfer energy. Europhysics Letters, 2012, 100, 37001.	2.0	85
12	Optical weights and waterfalls in doped charge-transfer insulators: A local density approximation and dynamical mean-field theory study of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>La</mml:mtext></mml:mrow><mml:mrow><mml:mn>2</mml:mr Physical Review B, 2008, 78, .	3.2	62
13	High-throughput antibody engineering in mammalian cells by CRISPR/Cas9-mediated homology-directed mutagenesis. Nucleic Acids Research, 2018, 46, 7436-7449.	14.5	61
14	Theory-Guided Synthesis of an Eco-Friendly and Low-Cost Copper Based Sulfide Thermoelectric Material. Journal of Physical Chemistry C, 2016, 120, 27135-27140.	3.1	60
15	Enhanced thermoelectric performance of Sn-doped Cu₃SbS₄. Journal of Materials Chemistry C, 2018, 6, 8546-8552.	5.5	59
16	Approach to a stationary state in a driven Hubbard model coupled to a thermostat. Physical Review B, 2012, 86, .	3.2	56
17	Dimensional Crossover Driven by an Electric Field. Physical Review Letters, 2012, 108, 086401.	7.8	52
18	immuneSIM: tunable multi-feature simulation of B- and T-cell receptor repertoires for immunoinformatics benchmarking. Bioinformatics, 2020, 36, 3594-3596.	4.1	48

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19	Phase Diagram of a Three-Orbital Model for High-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>T</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mm Superconductors. Physical Review Letters, 2014, 112, 117001.	7.8	43
20	Magnetism and superconductivity of strongly correlated electrons on the triangular lattice. Physical Review B, 2006, 73, .	3.2	42
21	Scanning-Tunneling Spectroscopy of Surface-State Electrons Scattered by a Slightly Disordered Two-Dimensional Dilute â€œSolidâ€: Ce on Ag(111). Physical Review Letters, 2004, 93, 146805.	7.8	40
22	In silico proof of principle of machine learning-based antibody design at unconstrained scale. MAbs, 2022, 14, 2031482.	5.2	40
23	Local selection rules that can determine specific pathways of DNA unknotting by type II DNA topoisomerases. Nucleic Acids Research, 2007, 35, 5223-5231.	14.5	39
24	Self-energies in itinerant magnets: A focus on Fe and Ni. Physical Review B, 2017, 95, .	3.2	39
25	Numerical Simulation of Gel Electrophoresis of DNA Knots in Weak and Strong Electric Fields. Biophysical Journal, 2006, 90, 3100-3105.	0.5	37
26	The immuneML ecosystem for machine learning analysis of adaptive immune receptor repertoires. Nature Machine Intelligence, 2021, 3, 936-944.	16.0	35
27	Renormalization of myoglobinâ€“ligand binding energetics by quantum many-body effects. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 5790-5795.	7.1	33
28	A Single-Cell Atlas of Lymphocyte Adaptive Immune Repertoires and Transcriptomes Reveals Age-Related Differences in Convalescent COVID-19 Patients. Frontiers in Immunology, 2021, 12, 701085.	4.8	33
29	Importance of Many-Body Effects in the Kernel of Hemoglobin for Ligand Binding. Physical Review Letters, 2013, 110, 106402.	7.8	29
30	Platypus: an open-access software for integrating lymphocyte single-cell immune repertoires with transcriptomes. NAR Genomics and Bioinformatics, 2021, 3, lqab023.	3.2	27
31	Evening out the spin and charge parity to increase $${T}_{c}$$ in $${{m{Sr}}}_{2}{{m{RuO}}}_{4}$$. Communications Physics, 2019, 2, .	5.3	26
32	Augmented hybrid exact-diagonalization solver for dynamical mean field theory. Physical Review B, 2012, 86, .	3.2	23
33	Finite-temperature properties of frustrated classical spins coupled to the lattice. Physical Review B, 2005, 72, .	3.2	22
34	Individualized VDJ recombination predisposes the available Ig sequence space. Genome Research, 2021, 31, 2209-2224.	5.5	22
35	Many-body renormalization of forces in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>f</mml:mi></mml:math> -electron materials. Physical Review B, 2018, 98, .	3.2	20
36	Electronâ€“phonon-driven three-dimensional metallicity in an insulating cuprate. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 6409-6416.	7.1	18

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37	Structural and electronic evolution in the Cu₃SbS₄â€“Cu₃SnS₄solid solution. Journal of Materials Chemistry C, 2020, 8, 11508-11516.	5.5	16
38	Sedimentation of macroscopic rigid knots and its relation to gel electrophoretic mobility of DNA knots. Scientific Reports, 2013, 3, 1091.	3.3	14
39	SARS-CoV-2 reactive and neutralizing antibodies discovered by single-cell sequencing of plasma cells and mammalian display. Cell Reports, 2022, 38, 110242.	6.4	13
40	Simulations of electrophoretic collisions of DNA knots with gel obstacles. Journal of Physics Condensed Matter, 2006, 18, S161-S171.	1.8	11
41	Anticollinear magnetic order induced by impurities in the frustrated Heisenberg model of pnictides. Physical Review B, 2012, 86, .	3.2	11
42	Impurity model for non-equilibrium steady states. Physical Review B, 2013, 87, .	3.2	11
43	Metal-Insulator Transition in Copper Oxides Induced by Apex Displacements. Physical Review X, 2018, 8, .	8.9	11
44	The Mott to Kondo transition in diluted Kondo superlattices. Communications Physics, 2019, 2, .	5.3	11
45	Accelerating the prediction of large carbon clusters via structure search: Evaluation of machine-learning and classical potentials. Carbon, 2022, 191, 255-266.	10.3	11
46	Bond-order-modulated staggered-flux phase of thetJmodel on a square lattice. Physical Review B, 2006, 74, .	3.2	10
47	High-frequency thermoelectric response in correlated electronic systems. Physical Review B, 2011, 84, .	3.2	10
48	First-principles study of electronic transport and structural properties of Cu12Sb4S13 in its high-temperature phase. Physical Review Research, 2020, 2, .	3.6	10
49	Continuous-time quantum Monte Carlo solver for dynamical mean field theory in the compact Legendre representation. Physical Review B, 2019, 99, .	3.2	9
50	Role of the lattice in the light-induced insulator-to-metal transition in vanadium dioxide. Physical Review Research, 2020, 2, .	3.6	9
51	Superexchange mechanism and quantum many body excitations in the archetypal di-Cu oxo-bridge. Communications Physics, 2020, 3, .	5.3	8
52	Data-driven dynamical mean-field theory: An error-correction approach to solve the quantum many-body problem using machine learning. Physical Review B, 2021, 104, .	3.2	7
53	Maximally localized dynamical quantum embedding for solving many-body correlated systems. Nature Computational Science, 2021, 1, 410-420.	8.0	6
54	Calculating dynamical mean-field theory forces in <i>ab initio</i> ultrasoft pseudopotential formalism. Physical Review B, 2021, 104, .	3.2	6

#	Article	IF	Citations
55	ONETEP + TOSCAM: Uniting Dynamical Mean Field Theory and Linear-Scaling Density Functional Theory. Journal of Chemical Theory and Computation, 2020, 16, 4899-4911.	5.3	5
56	What controls the critical temperature of high temperature copper oxide superconductors: insights from scanneling tunnelling microscopy. Science Bulletin, 2017, 62, 102-104.	9.0	4
57	Tuning topological surface states by cleavage angle in topological crystalline insulators. Physical Review B, 2019, 100, .	3.2	4
58	Nanoscopic time crystal obtained by nonergodic spin dynamics. Physical Review B, 2019, 100, .	3.2	4
59	Electronic Structure Correspondence of Singlet-Triplet Scale Separation in Strained Sr2RuO4. Applied Sciences (Switzerland), 2021, 11, 508.	2.5	4
60	Study of disorder in pulsed laser deposited double perovskite oxides by first-principle structure prediction. Npj Computational Materials, 2021, 7, .	8.7	4
61	Ultrafast Electron Dynamics in Magnetic Thin Films. Applied Sciences (Switzerland), 2021, 11, 9753.	2.5	4
62	High-Temperature Superconductivity in the Lanthanide Hydrides at Extreme Pressures. Applied Sciences (Switzerland), 2022, 12, 874.	2.5	4
63	Unifying guiding principles for designing optimized superconductors. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	3
64	Checkerboard order in the â€“ model on the square lattice. Journal of Magnetism and Magnetic Materials, 2007, 310, 523-525.	2.3	2
65	Computational materials discovery for lanthanide hydrides at high pressure for high temperature superconductivity. Physical Review Research, 2022, 4, .	3.6	2
66	From Slater to Mott physics by epitaxially engineering electronic correlations in oxide interfaces. Npj Computational Materials, 2021, 7, .	8.7	1
67	Emergence of long-range magnetic order stabilized by magnetic impurities in pnictides. Physical Review B, 2019, 99, .	3.2	0
68	Exploring the Effect of the Number of Hydrogen Atoms on the Properties of Lanthanide Hydrides by DMFT. Applied Sciences (Switzerland), 2022, 12, 3498.	2.5	0
69	Many-Body Study of Iron(III)-Bound Human Serum Transferrin. Journal of Physical Chemistry Letters, 2022, , 4419-4425.	4.6	0