

Richard Schmidt

List of Publications by Year in descending order

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54
papers

2,981
citations

201674

27
h-index

182427

51
g-index

54
all docs

54
docs citations

54
times ranked

2247
citing authors

#	ARTICLE	IF	CITATIONS
1	A cold-atom Fermi-Hubbard antiferromagnet. <i>Nature</i> , 2017, 545, 462-466.	27.8	514
2	Ultrafast many-body interferometry of impurities coupled to a Fermi sea. <i>Science</i> , 2016, 354, 96-99.	12.6	252
3	Field-theoretical study of the Bose polaron. <i>Physical Review A</i> , 2013, 88, .	2.5	197
4	Universal many-body response of heavy impurities coupled to a Fermi sea: a review of recent progress. <i>Reports on Progress in Physics</i> , 2018, 81, 024401.	20.1	135
5	Quantum Dynamics of Ultracold Bose Polarons. <i>Physical Review Letters</i> , 2016, 117, 113002.	7.8	134
6	Site-selectively generated photon emitters in monolayer MoS2 via local helium ion irradiation. <i>Nature Communications</i> , 2019, 10, 2755.	12.8	132
7	Fermi polarons in two dimensions. <i>Physical Review A</i> , 2012, 85, .	2.5	121
8	Excitation spectra and rf response near the polaron-to-molecule transition from the functional renormalization group. <i>Physical Review A</i> , 2011, 83, .	2.5	119
9	Creation of Rydberg Polarons in a Bose Gas. <i>Physical Review Letters</i> , 2018, 120, 083401.	7.8	113
10	Efimov physics beyond universality. <i>European Physical Journal B</i> , 2012, 85, 1.	1.5	93
11	Mesoscopic Rydberg Impurity in an Atomic Quantum Gas. <i>Physical Review Letters</i> , 2016, 116, 105302.	7.8	90
12	Rotation of Quantum Impurities in the Presence of a Many-Body Environment. <i>Physical Review Letters</i> , 2015, 114, 203001.	7.8	87
13	Strong-coupling Bose polarons in a Bose-Einstein condensate. <i>Physical Review A</i> , 2017, 96, .	2.5	70
14	Interacting Polaron-Polaritons. <i>Physical Review X</i> , 2020, 10, .	8.9	63
15	Deformation of a Quantum Many-Particle System by a Rotating Impurity. <i>Physical Review X</i> , 2016, 6, .	8.9	50
16	Theory of exciton-electron scattering in atomically thin semiconductors. <i>Physical Review B</i> , 2020, 101, .	3.2	50
17	Nonrelativistic inverse square potential, scale anomaly, and complex extension. <i>Annals of Physics</i> , 2010, 325, 491-513.	2.8	47
18	Observation of a Smooth Polaron-Molecule Transition in a Degenerate Fermi Gas. <i>Physical Review X</i> , 2020, 10, .	8.9	45

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19	Physics and the choice of regulators in functional renormalisation group flows. <i>Annals of Physics</i> , 2017, 384, 165-197.	2.8	42
20	Efimov effect from functional renormalization. <i>Physical Review A</i> , 2009, 79, .	2.5	40
21	Functional renormalization for trion formation in ultracold fermion gases. <i>Physical Review A</i> , 2009, 79, .	2.5	39
22	Renormalization-group study of the four-body problem. <i>Physical Review A</i> , 2010, 81, .	2.5	39
23	Theory of excitation of Rydberg polarons in an atomic quantum gas. <i>Physical Review A</i> , 2018, 97, .	2.5	38
24	Magnetic noise spectroscopy as a probe of local electronic correlations in two-dimensional systems. <i>Physical Review B</i> , 2017, 95, .	3.2	37
25	Ionic polaron in a Bose-Einstein condensate. <i>Communications Physics</i> , 2021, 4, .	5.3	30
26	Three-body loss in lithium from functional renormalization. <i>Physical Review A</i> , 2009, 79, .	2.5	28
27	Mobile impurity in a Bose-Einstein condensate and the orthogonality catastrophe. <i>Physical Review A</i> , 2021, 103, .	2.5	28
28	Theory of Ultralong-Range Rydberg Molecule Formation Incorporating Spin-Dependent Relativistic Effects: Cs(6s)-Cs(np) as Case Study. <i>ChemPhysChem</i> , 2016, 17, 3683-3691.	2.1	27
29	Rotation of cold molecular ions inside a Bose-Einstein condensate. <i>Physical Review A</i> , 2016, 94, .	2.5	27
30	Many-body interferometry of magnetic polaron dynamics. <i>Physical Review B</i> , 2018, 97, .	3.2	26
31	Quantum Rydberg Central Spin Model. <i>Physical Review Letters</i> , 2019, 123, 183001.	7.8	25
32	Optical Signatures of Periodic Charge Distribution in a Mott-like Correlated Insulator State. <i>Physical Review X</i> , 2021, 11, .	8.9	24
33	Probing nonlocal spatial correlations in quantum gases with ultra-long-range Rydberg molecules. <i>Physical Review A</i> , 2019, 100, .	2.5	23
34	Transport of Neutral Optical Excitations Using Electric Fields. <i>Physical Review X</i> , 2019, 9, .	8.9	23
35	Dynamical Variational Approach to Bose Polarons at Finite Temperatures. <i>Physical Review Letters</i> , 2020, 124, 223401.	7.8	21
36	Rydberg impurity in a Fermi gas: Quantum statistics and rotational blockade. <i>Physical Review Research</i> , 2020, 2, .	3.6	21

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37	Vibrational Dressing in Kinetically Constrained Rydberg Spin Systems. <i>Physical Review Letters</i> , 2020, 125, 033602.	7.8	20
38	Efimov states near a Feshbach resonance and the limits of van der Waals universality at finite background scattering length. <i>Physical Review A</i> , 2018, 97, .	2.5	16
39	Efimov Physics from the Functional Renormalization Group. <i>Few-Body Systems</i> , 2011, 51, 153-180.	1.5	10
40	Atomtronics with a spin: Statistics of spin transport and nonequilibrium orthogonality catastrophe in cold quantum gases. <i>Physical Review B</i> , 2019, 99, .	3.2	10
41	Excitonâ€“polarons in two-dimensional semiconductors and the Tavisâ€“Cummings model. <i>Comptes Rendus Physique</i> , 2021, 22, 89-96.	0.9	10
42	Bose polaron and the Efimov effect: A Gaussian-state approach. <i>Physical Review A</i> , 2022, 105, .	2.5	10
43	Quantum-Zeno Fermi polaron in the strong dissipation limit. <i>Physical Review Research</i> , 2021, 3, .	3.6	9
44	Efficient variational approach to dynamics of a spatially extended bosonic Kondo model. <i>Physical Review A</i> , 2019, 100, .	2.5	8
45	Wigner crystals in two-dimensional transition-metal dichalcogenides: Spin physics and readout. <i>Physical Review B</i> , 2020, 101, .	3.2	8
46	Intermolecular forces and correlations mediated by a phonon bath. <i>Journal of Chemical Physics</i> , 2020, 152, 164302.	3.0	6
47	Functional-renormalization-group approach to strongly coupled Bose-Fermi mixtures in two dimensions. <i>Physical Review A</i> , 2022, 105, .	2.5	6
48	Chemistry of a Light Impurity in a Bose-Einstein Condensate. <i>Physical Review Letters</i> , 2022, 128, 183401.	7.8	6
49	CHAPTER 9. Molecular Impurities Interacting with a Many-particle Environment: From Ultracold Gases to Helium Nanodroplets. <i>RSC Theoretical and Computational Chemistry Series</i> , 2017, , 444-495.	0.7	5
50	Tunable Feshbach Resonances and Their Spectral Signatures in Bilayer Semiconductors. <i>Physical Review Letters</i> , 2022, 129, .	7.8	5
51	Disorder in order: Localization without randomness in a cold-atom system. <i>Physical Review A</i> , 2022, 105, .	2.5	2
52	Functional renormalization group approach to the four-body problem. <i>EPJ Web of Conferences</i> , 2010, 3, 02006.	0.3	0
53	Quasiteilchen in Zeitlupe. <i>Physik in Unserer Zeit</i> , 2017, 48, 6-7.	0.0	0
54	Dynamics of atoms within atoms. <i>New Journal of Physics</i> , 0, , .	2.9	0