Raphael F Ribeiro

List of Publications by Year
in descending order

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51 papers	3,834 citations	201385 27 h-index	182168 51 g-index
55 all docs	55 docs citations	55 times ranked	3538 citing authors

#	Article	IF	Citations
1	Use of Solution-Phase Vibrational Frequencies in Continuum Models for the Free Energy of Solvation. Journal of Physical Chemistry B, 2011, 115, 14556-14562.	1.2	828
2	Polariton chemistry: controlling molecular dynamics with optical cavities. Chemical Science, 2018, 9, 6325-6339.	3.7	403
3	Exploiting chemistry and molecular systems for quantum information science. Nature Reviews Chemistry, 2020, 4, 490-504.	13.8	247
4	Theory for polariton-assisted remote energy transfer. Chemical Science, 2018, 9, 6659-6669.	3.7	158
5	Resonant catalysis of thermally activated chemical reactions with vibrational polaritons. Nature Communications, 2019, 10, 4685.	5.8	144
6	Does Coherence Enhance Transport in Photosynthesis?. Journal of Physical Chemistry Letters, 2013, 4, 362-367.	2.1	143
7	Two-dimensional infrared spectroscopy of vibrational polaritons. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4845-4850.	3.3	143
8	Intermolecular vibrational energy transfer enabled by microcavity strong lightâ€“matter coupling. Science, 2020, 368, 665-667.	6.0	131
9	Inverting singlet and triplet excited states using strong light-matter coupling. Science Advances, 2019, 5, eaax4482.	4.7	116
10	Polariton-Assisted Singlet Fission in Acene Aggregates. Journal of Physical Chemistry Letters, 2018, 9, 1951-1957.	2.1	106
11	Manipulating molecules with strong coupling: harvesting triplet excitons in organic exciton microcavities. Chemical Science, 2020, 11, 343-354.	3.7	98
12	Can Ultrastrong Coupling Change Ground-State Chemical Reactions?. ACS Photonics, 2018, 5, 167-176.	3.2	95
13	Prediction of SAMPL2 aqueous solvation free energies and tautomeric ratios using the SM8, SM8AD, and SMD solvation models. Journal of Computer-Aided Molecular Design, 2010, 24, 317-333.	1.3	94
14	Polaritonic normal modes in transition state theory. Journal of Chemical Physics, 2020, 152, 161101.	1.2	75
15	Theory for Nonlinear Spectroscopy of Vibrational Polaritons. Journal of Physical Chemistry Letters, 2018, 9, 3766-3771.	2.1	72
16	Remote Control of Chemistry in Optical Cavities. CheM, 2019, 5, 1167-1181.	5.8	68
17	Plexciton Dirac points and topological modes. Nature Communications, 2016, 7, 11783.	5.8	66
18	State-Selective Polariton to Dark State Relaxation Dynamics. Journal of Physical Chemistry A, 2019, 123, 5918-5927.	1.1	65

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19	Catalysis by Dark States in Vibropolaritonic Chemistry. Physical Review Letters, 2022, 128, 096001.	2.9	62
20	Manipulating optical nonlinearities of molecular polaritons by delocalization. Science Advances, 2019, 5, eaax5196.	4.7	57
21	Topologically protected excitons in porphyrin thinÂfilms. Nature Materials, 2014, 13, 1026-1032.	13.3	55
22	Triplet harvesting in the polaritonic regime: A variational polaron approach. Journal of Chemical Physics, 2019, 151, .	1.2	50
23	Polariton chemistry: Thinking inside the (photon) box. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 5214-5216.	3.3	48
24	Coherent Exciton Dynamics in Supramolecular Light-Harvesting Nanotubes Revealed by Ultrafast Quantum Process Tomography. ACS Nano, 2014, 8, 5527-5534.	7.3	46
25	The solvation, partitioning, hydrogen bonding, and dimerization of nucleotide bases: a multifaceted challenge for quantum chemistry. Physical Chemistry Chemical Physics, 2011, 13, 10908.	1.3	40
26	Polariton Chemistry: Action in the Dark. ACS Central Science, 2019, 5, 386-388.	5.3	36
27	Microcavity-like exciton-polaritons can be the primary photoexcitation in bare organic semiconductors. Nature Communications, 2021, 12, 6519.	5.8	32
28	Nonequilibrium effects of cavity leakage and vibrational dissipation in thermally activated polariton chemistry. Journal of Chemical Physics, 2021, 154, 084108.	1.2	30
29	Polariton Assisted Down-Conversion of Photons via Nonadiabatic Molecular Dynamics: A Molecular Dynamical Casimir Effect. Journal of Physical Chemistry Letters, 2020, 11, 152-159.	2.1	28
30	Enhanced optical nonlinearities under collective strong light-matter coupling. Physical Review A, 2021, 103, .	1.0	28
31	Corrections to Thomas-Fermi Densities at Turning Points and Beyond. Physical Review Letters, 2015, 114, 050401.	2.9	23
32	Polariton chemistry: Molecules in cavities and plasmonic media. Journal of Chemical Physics, 2022, 156, 030401.	1.2	20
33	Driving chemical reactions with polariton condensates. Nature Communications, 2022, 13, 1645.	5.8	19
34	Molecular Emission near Metal Interfaces: The Polaritonic Regime. Journal of Physical Chemistry Letters, 2018, 9, 6511-6516.	2.1	17
35	Multimode polariton effects on molecular energy transport and spectral fluctuations. Communications Chemistry, 2022, 5, .	2.0	17
36	Generalization of the Tavisâ€“Cummings model for multi-level anharmonic systems. New Journal of Physics, 2021, 23, 063081.	1.2	16

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37	Purcell Effect of Plasmonic Surface Lattice Resonances and Its Influence on Energy Transfer. ACS Photonics, 2021, 8, 2211-2219.	3.2	16
38	Generalization of the Tavisâ€“Cummings model for multi-level anharmonic systems: Insights on the second excitation manifold. Journal of Chemical Physics, 2022, 156, .	1.2	16
39	Active Plasmonics and Active Chiral Plasmonics through Orientation-Dependent Multipolar Interactions. ACS Nano, 2020, 14, 11518-11532.	7.3	15
40	Practical witness for electronic coherences. Journal of Chemical Physics, 2014, 141, 244109.	1.2	14
41	Leading corrections to local approximations. II. The case with turning points. Physical Review B, 2017, 95, .	1.1	11
42	Deriving uniform semiclassical approximations for one-dimensional fermionic systems. Journal of Chemical Physics, 2018, 148, 194103.	1.2	10
43	Solvent Dependence of¹⁴N Nuclear Magnetic Resonance Chemical Shielding Constants as a Test of the Accuracy of the Computed Polarization of Solute Electron Densities by the Solvent. Journal of Chemical Theory and Computation, 2009, 5, 2284-2300.	2.3	9
44	Optical Activity from the Exciton Aharonovâ€“Bohm Effect: A Floquet Engineering Approach. Journal of Physical Chemistry C, 2020, 124, 4206-4214.	1.5	7
45	Enantioselective Topological Frequency Conversion. Journal of Physical Chemistry Letters, 2022, 13, 2434-2441.	2.1	6
46	Vibronic Ground-State Degeneracies and the Berry Phase: A Continuous Symmetry Perspective. Journal of Physical Chemistry Letters, 2018, 9, 242-247.	2.1	4
47	Comment on â€˜Quantum theory of collective strong coupling of molecular vibrations with a microcavity modeâ€™. New Journal of Physics, 2018, 20, 018002.	1.2	4
48	Remarks on time-dependent [current]-density functional theory for open quantum systems. Physical Chemistry Chemical Physics, 2013, 15, 12626.	1.3	3
49	Continuous vibronic symmetries in Jahnâ€“Teller models. Journal of Physics Condensed Matter, 2018, 30, 333001.	0.7	3
50	Computational method for highly constrained molecular dynamics of rigid bodies: Coarse-grained simulation of auxetic two-dimensional protein crystals. Journal of Chemical Physics, 2020, 152, 244102.	1.2	0
51	Controlling chemistry with vibrational polaritons. , 2019, , .		0