Ignacio Franco

List of Publications by Year
in descending order

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56	1,238	304368	395343
papers	citations	22 h-index	33 g-index

60	60	60	1284
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Coherent and Incoherent Contributions to Molecular Electron Transport. Journal of Chemical Physics, 2022, 156, 094302.	1.2	12
2	Light-field control of real and virtual charge carriers. Nature, 2022, 605, 251-255.	13.7	57
3	Theory of dissipation pathways in open quantum systems. Journal of Chemical Physics, 2021, 154, 084109.	1.2	7
4	Dielsâ€“Alder Reaction in a Molecular Junction. Journal of Physical Chemistry C, 2021, 125, 14599-14606.	1.5	10
5	Screening and band bending effects in the Stark control of electrons at interfaces (SCELI). Physical Review B, 2021, 103, .	1.1	3
6	Understanding the Conductance Dispersion of Single-Molecule Junctions. Journal of Physical Chemistry C, 2021, 125, 3406-3414.	1.5	23
7	Electronic Coherence and Coherent Dephasing in the Optical Control of Electrons in Graphene. Nano Letters, 2021, 21, 9403-9409.	4.5	18
8	Symmetry breaking in the Stark Control of Electrons at Interfaces (SCELI). Journal of Chemical Physics, 2020, 153, 044704.	1.2	9
9	Toward the laser control of electronic decoherence. Journal of Chemical Physics, 2020, 152, 184305.	1.2	6
10	Optical properties of periodically driven open nonequilibrium quantum systems. Journal of Chemical Physics, 2020, 152, 094101.	1.2	13
11	When can quantum decoherence be mimicked by classical noise?. Journal of Chemical Physics, 2019, 151, 014109.	1.2	22
12	Forceâ€“conductance spectroscopy of a single-molecule reaction. Chemical Science, 2019, 10, 3249-3256.	3.7	14
13	Molecular Electronics: Toward the Atomistic Modeling of Conductance Histograms. Journal of Physical Chemistry C, 2019, 123, 9693-9701.	1.5	13
14	Theory of Decoherence Timescales of Molecular Processes. , 2019, , .		0
15	Understanding electronic decoherence in molecules from exact modeling. , 2019, , .		0
16	Stark Control of Electrons Across Interfaces. , 2019, , .		0
17	Modeling Nonreactive Moleculeâ€“Surface Systems on Experimentally Relevant Time and Length Scales: Dynamics and Conductance of Polyfluorene on Au(111). Journal of Physical Chemistry Letters, 2018, 9, 1140-1145.	2.1	7
18	Signatures of Conformational Dynamics and Electrode-Molecule Interactions in the Conductance Profile During Pulling of Single-Molecule Junctions. Journal of Physical Chemistry Letters, 2018, 9, 745-750.	2.1	31

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19	Generalized Theory for the Timescale of Molecular Electronic Decoherence in the Condensed Phase. Journal of Physical Chemistry Letters, 2018, 9, 773-778.	2.1	36
20	Optical absorption properties of laser-driven matter. Physical Review A, 2018, 98, .	1.0	16
21	Electronic interactions do not affect electronic decoherence in the pure-dephasing limit. Journal of Chemical Physics, 2018, 149, 174115.	1.2	8
22	Stark control of electrons across interfaces. Physical Review B, 2018, 98, .	1.1	13
23	Stark control of electrons along nanojunctions. Nature Communications, 2018, 9, 2070.	5.8	32
24	Lessons on electronic decoherence in molecules from exact modeling. Journal of Chemical Physics, 2018, 148, 134304.	1.2	24
25	How Structural Defects Affect the Mechanical and Electrical Properties of Single Molecular Wires. Physical Review Letters, 2018, 121, 047701.	2.9	24
26	Single-molecule force-conductance spectroscopy of hydrogen-bonded complexes. Journal of Chemical Physics, 2017, 146, 092329.	1.2	20
27	When can time-dependent currents be reproduced by the Landauer steady-state approximation?. Journal of Chemical Physics, 2017, 146, 174101.	1.2	18
28	Quantifying fermionic decoherence in many-body systems. Journal of Chemical Physics, 2017, 146, 214107.	1.2	9
29	Partial hydrodynamic representation of quantum molecular dynamics. Journal of Chemical Physics, 2017, 146, 194104.	1.2	17
30	Entanglement in the Bornâ€“Oppenheimer Approximation. Journal of Chemical Theory and Computation, 2017, 13, 20-28.	2.3	30
31	Excitonic Coupling Modulated by Mechanical Stimuli. Journal of Physical Chemistry Letters, 2017, 8, 4326-4332.	2.1	8
32	Quantifying Early Time Quantum Decoherence Dynamics through Fluctuations. Journal of Physical Chemistry Letters, 2017, 8, 4289-4294.	2.1	32
33	Understanding the Fundamental Connection Between Electronic Correlation and Decoherence. Journal of Physical Chemistry Letters, 2016, 7, 1616-1621.	2.1	11
34	Hydrogen Bonding in Tight Environments: Simulated Force Spectroscopy of Nanoconfined Hydrogen-Bonded Complexes. Journal of Physical Chemistry C, 2016, 120, 19470-19478.	1.5	6
35	Molecular Junctions: Can Pulling Influence Optical Controllability?. Nano Letters, 2014, 14, 4587-4591.	4.5	22
36	Simple and Accurate Method for Time-Dependent Transport along Nanoscale Junctions. Journal of Physical Chemistry C, 2014, 118, 20009-20017.	1.5	41

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37	Correlated Electron-Nuclear Dynamics with Conditional Wave Functions. Physical Review Letters, 2014, 113, 083003.	2.9	30
38	Reduced purities as measures of decoherence in many-electron systems. Journal of Chemical Physics, 2013, 139, 094109.	1.2	7
39	Femtosecond currents via the dynamic Stark effect. Physics Today, 2013, 66, 9-9.	0.3	0
40	Long-lived oscillatory incoherent electron dynamics in molecules:trans-polyacetylene oligomers. New Journal of Physics, 2013, 15, 043004.	1.2	11
41	Electronic coherence dynamics in trans-polyacetylene oligomers. Journal of Chemical Physics, 2012, 136, 144501.	1.2	19
42	Defects in DNA: Lessons from Molecular Motor Design. Journal of Physical Chemistry Letters, 2012, 3, 689-693.	2.1	11
43	Coulombic Interactions and Crystal Packing Effects in the Folding of Donorâ^'Acceptor Oligorotaxanes. Journal of Physical Chemistry B, 2011, 115, 2477-2484.	1.2	11
44	DNA-Based Optomechanical Molecular Motor. Journal of the American Chemical Society, 2011, 133, 3452-3459.	6.6	56
45	Tunneling Currents That Increase with Molecular Elongation. Journal of the American Chemical Society, 2011, 133, 15714-15720.	6.6	34
46	Mechanically Activated Molecular Switch through Single-Molecule Pulling. Journal of the American Chemical Society, 2011, 133, 2242-2249.	6.6	68
47	Quantum interferences and their classical limit in laser driven coherent control scenarios. Chemical Physics, 2010, 370, 143-150.	0.9	6
48	Coherent control in the classical limit: Symmetry breaking in an optical lattice. Physical Review A, 2009, 80, .	1.0	11
49	Single-molecule pulling and the folding of donor-acceptor oligorotaxanes: Phenomenology and interpretation. Journal of Chemical Physics, 2009, 131, 124902.	1.2	33
50	Femtosecond dynamics and laser control of charge transport in trans-polyacetylene. Journal of Chemical Physics, 2008, 128, 244905.	1.2	26
51	Minimum requirements for laser-induced symmetry breaking in quantum and classical mechanics. Journal of Physics B: Atomic, Molecular and Optical Physics, 2008, 41, 074003.	0.6	32
52	Laser-induced currents along molecular wire junctions. Journal of Chemical Physics, 2008, 128, 244906.	1.2	37
53	Robust Ultrafast Currents in Molecular Wires through Stark Shifts. Physical Review Letters, 2007, 99, 126802.	2.9	57
54	Laser-Induced Spatial Symmetry Breaking in Quantum and Classical Mechanics. Physical Review Letters, 2006, 97, 040402.	2.9	29

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55	Electron-Vibrational Dynamics of Photoexcited Polyfluorenes. Journal of the American Chemical Society, 2004, 126, 12130-12140.	6.6	108
56	Electron-vibrational relaxation of photoexcited polyfluorenes in the presence of chemical defects: A theoretical study. Chemical Physics Letters, 2003, 372, 403-408.	1.2	35