Ignacio Franco

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2779160/publications.pdf

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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	Electron-Vibrational Dynamics of Photoexcited Polyfluorenes. Journal of the American Chemical Society, 2004, 126, 12130-12140.	6.6	108
2	Mechanically Activated Molecular Switch through Single-Molecule Pulling. Journal of the American Chemical Society, 2011, 133, 2242-2249.	6.6	68
3	Robust Ultrafast Currents in Molecular Wires through Stark Shifts. Physical Review Letters, 2007, 99, 126802.	2.9	57
4	Light-field control of real and virtual charge carriers. Nature, 2022, 605, 251-255.	13.7	57
5	DNA-Based Optomechanical Molecular Motor. Journal of the American Chemical Society, 2011, 133, 3452-3459.	6.6	56
6	Simple and Accurate Method for Time-Dependent Transport along Nanoscale Junctions. Journal of Physical Chemistry C, 2014, 118, 20009-20017.	1.5	41
7	Laser-induced currents along molecular wire junctions. Journal of Chemical Physics, 2008, 128, 244906.	1.2	37
8	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
9	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
10	Tunneling Currents That Increase with Molecular Elongation. Journal of the American Chemical Society, 2011, 133, 15714-15720.	6.6	34
11	Single-molecule pulling and the folding of donor-acceptor oligorotaxanes: Phenomenology and interpretation. Journal of Chemical Physics, 2009, 131, 124902.	1.2	33
12	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
13	Quantifying Early Time Quantum Decoherence Dynamics through Fluctuations. Journal of Physical Chemistry Letters, 2017, 8, 4289-4294.	2.1	32
14	Stark control of electrons along nanojunctions. Nature Communications, 2018, 9, 2070.	5.8	32
15	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
16	Correlated Electron-Nuclear Dynamics with Conditional Wave Functions. Physical Review Letters, 2014, 113, 083003.	2.9	30
17	Entanglement in the Bornâ€“Oppenheimer Approximation. Journal of Chemical Theory and Computation, 2017, 13, 20-28.	2.3	30
18	Laser-Induced Spatial Symmetry Breaking in Quantum and Classical Mechanics. Physical Review Letters, 2006, 97, 040402.	2.9	29

#	Article	IF	Citations
19	Femtosecond dynamics and laser control of charge transport in trans-polyacetylene. Journal of Chemical Physics, 2008, 128, 244905.	1.2	26
20	Lessons on electronic decoherence in molecules from exact modeling. Journal of Chemical Physics, 2018, 148, 134304.	1.2	24
21	How Structural Defects Affect the Mechanical and Electrical Properties of Single Molecular Wires. Physical Review Letters, 2018, 121, 047701.	2.9	24
22	Understanding the Conductance Dispersion of Single-Molecule Junctions. Journal of Physical Chemistry C, 2021, 125, 3406-3414.	1.5	23
23	Molecular Junctions: Can Pulling Influence Optical Controllability?. Nano Letters, 2014, 14, 4587-4591.	4.5	22
24	When can quantum decoherence be mimicked by classical noise?. Journal of Chemical Physics, 2019, 151, 014109.	1.2	22
25	Single-molecule force-conductance spectroscopy of hydrogen-bonded complexes. Journal of Chemical Physics, 2017, 146, 092329.	1.2	20
26	Electronic coherence dynamics in trans-polyacetylene oligomers. Journal of Chemical Physics, 2012, 136, 144501.	1.2	19
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	Electronic Coherence and Coherent Dephasing in the Optical Control of Electrons in Graphene. Nano Letters, 2021, 21, 9403-9409.	4.5	18
29	Partial hydrodynamic representation of quantum molecular dynamics. Journal of Chemical Physics, 2017, 146, 194104.	1.2	17
30	Optical absorption properties of laser-driven matter. Physical Review A, 2018, 98, .	1.0	16
31	Forceâ€“conductance spectroscopy of a single-molecule reaction. Chemical Science, 2019, 10, 3249-3256.	3.7	14
32	Stark control of electrons across interfaces. Physical Review B, 2018, 98, .	1.1	13
33	Molecular Electronics: Toward the Atomistic Modeling of Conductance Histograms. Journal of Physical Chemistry C, 2019, 123, 9693-9701.	1.5	13
34	Optical properties of periodically driven open nonequilibrium quantum systems. Journal of Chemical Physics, 2020, 152, 094101.	1.2	13
35	Coherent and Incoherent Contributions to Molecular Electron Transport. Journal of Chemical Physics, 2022, 156, 094302.	1.2	12
36	Coherent control in the classical limit: Symmetry breaking in an optical lattice. Physical Review A, 2009, 80, .	1.0	11

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37	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
38	Defects in DNA: Lessons from Molecular Motor Design. Journal of Physical Chemistry Letters, 2012, 3, 689-693.	2.1	11
39	Long-lived oscillatory incoherent electron dynamics in molecules:trans-polyacetylene oligomers. New Journal of Physics, 2013, 15, 043004.	1.2	11
40	Understanding the Fundamental Connection Between Electronic Correlation and Decoherence. Journal of Physical Chemistry Letters, 2016, 7, 1616-1621.	2.1	11
41	Dielsâ€“Alder Reaction in a Molecular Junction. Journal of Physical Chemistry C, 2021, 125, 14599-14606.	1.5	10
42	Quantifying fermionic decoherence in many-body systems. Journal of Chemical Physics, 2017, 146, 214107.	1.2	9
43	Symmetry breaking in the Stark Control of Electrons at Interfaces (SCELI). Journal of Chemical Physics, 2020, 153, 044704.	1.2	9
44	Excitonic Coupling Modulated by Mechanical Stimuli. Journal of Physical Chemistry Letters, 2017, 8, 4326-4332.	2.1	8
45	Electronic interactions do not affect electronic decoherence in the pure-dephasing limit. Journal of Chemical Physics, 2018, 149, 174115.	1.2	8
46	Reduced purities as measures of decoherence in many-electron systems. Journal of Chemical Physics, 2013, 139, 094109.	1.2	7
47	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
48	Theory of dissipation pathways in open quantum systems. Journal of Chemical Physics, 2021, 154, 084109.	1.2	7
49	Quantum interferences and their classical limit in laser driven coherent control scenarios. Chemical Physics, 2010, 370, 143-150.	0.9	6
50	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
51	Toward the laser control of electronic decoherence. Journal of Chemical Physics, 2020, 152, 184305.	1.2	6
52	Screening and band bending effects in the Stark control of electrons at interfaces (SCELI). Physical Review B, 2021, 103, .	1.1	3
53	Femtosecond currents via the dynamic Stark effect. Physics Today, 2013, 66, 9-9.	0.3	0
54	Theory of Decoherence Timescales of Molecular Processes. , 2019, , .		0

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55	Understanding electronic decoherence in molecules from exact modeling. , 2019, , .		0
56	Stark Control of Electrons Across Interfaces. , 2019, , .		0