Herschel A Rabitz

List of Publications by Year
in descending order

403 papers	18,079 citations	19657 61 h-index	17105 122 g-index
409 all docs	409 docs citations	409 times ranked	6222 citing authors

#	Article	IF	Citations
1	Global Sensitivity Analysis with Mixtures: A Generalized Functional ANOVA Approach. Risk Analysis, 2022, 42, 304-333.	2.7	2
2	Selective Photo-Excitation of Molecules Enabled by Stimulated Raman Pre-Excitation. Physical Chemistry Chemical Physics, 2022, , .	2.8	0
3	Protein Folding Interdiction Strategy for Therapeutic Drug Development in Viral Diseases: Ebola VP40 and Influenza A M1. International Journal of Molecular Sciences, 2022, 23, 3906.	4.1	2
4	The optimization landscape of hybrid quantumâ€“classical algorithms: From quantum control to NISQ applications. Annual Reviews in Control, 2022, 54, 314-323.	7.9	11
5	Learning Control of Quantum Systems Using Frequency-Domain Optimization Algorithms. IEEE Transactions on Control Systems Technology, 2021, 29, 1791-1798.	5.2	16
6	A key bidirectional switching issue in optogenetics emulated with laser dyes to illustrate its mitigation using nonlinear optical tools. Applied Physics Letters, 2021, 118, 024101.	3.3	1
7	From Pulses to Circuits and Back Again: A Quantum Optimal Control Perspective on Variational Quantum Algorithms. PRX Quantum, 2021, 2, .	9.2	54
8	Quantum system compression: A Hamiltonian guided walk through Hilbert space. Physical Review A, 2021, 103, .	2.5	3
9	Quantum Control Landscapes Beyond the Dipole Approximation: Controllability, Singular Controls, and Resources. Frontiers in Physics, 2021, 9, .	2.1	1
10	Optimization Landscape of Quantum Control Systems. Complex System Modeling and Simulation, 2021, 1, 77-90.	5.3	5
11	Digital quantum simulation of molecular dynamics and control. Physical Review Research, 2021, 3, .	3.6	16
12	Multi-level evolution strategies for high-resolution black-box control. Journal of Heuristics, 2021, 27, 1021.	1.4	0
13	Identification of Two Early Folding Stage Prion Non-Local Contacts Suggested to Serve as Key Steps in Directing the Final Fold to Be Either Native or Pathogenic. International Journal of Molecular Sciences, 2021, 22, 8619.	4.1	2
14	The Promise of Mutation Resistant Drugs for SARS-CoV-2 That Interdict in the Folding of the Spike Protein Receptor Binding Domain. Covid, 2021, 1, 288-302.	1.5	3
15	Progress toward favorable landscapes in quantum combinatorial optimization. Physical Review A, 2021, 104, .	2.5	20
16	Hitting Times of Some Critical Events in RNA Origins of Life. Life, 2021, 11, 1419.	2.4	0
17	Learning-Based Quantum Robust Control: Algorithm, Applications, and Experiments. IEEE Transactions on Cybernetics, 2020, 50, 3581-3593.	9.5	63
18	Quantum State Filter With Disturbance and Noise. IEEE Transactions on Automatic Control, 2020, 65, 2856-2866.	5.7	7

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19	Drawing together control landscape and tomography principles. Physical Review A, 2020, 102, .	2.5	8
20	Interdiction of Protein Folding for Therapeutic Drug Development in SARS CoV-2. Journal of Physical Chemistry B, 2020, 124, 8201-8208.	2.6	13
21	Optimal control of coupled quantum systems based on the first-order Magnus expansion: Application to multiple dipole-dipole-coupled molecular rotors. Physical Review A, 2020, 102, .	2.5	5
22	Assessing three closed-loop learning algorithms by searching for high-quality quantum control pulses. Physical Review A, 2020, 102, .	2.5	16
23	Robust quantum control in games: An adversarial learning approach. Physical Review A, 2020, 101, .	2.5	33
24	Combining the synergistic control capabilities of modeling and experiments: Illustration of finding a minimum-time quantum objective. Physical Review A, 2020, 101, .	2.5	9
25	An upper bound on the time required to implement unitary operations. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 125304.	2.1	4
26	Ultrafast Photofragmentation of Ln(hfac)3 with a Proposed Mechanism for forming High Mass Fluorinated Products. Scientific Reports, 2020, 10, 7066.	3.3	3
27	Numerical meshless solution of high-dimensional sine-Gordon equations via Fourier HDMR-HC approximation. Journal of Mathematical Chemistry, 2019, 57, 1683-1699.	1.5	0
28	Inherently trap-free convex landscapes for fully quantum optimal control. Journal of Mathematical Chemistry, 2019, 57, 2154-2167.	1.5	6
29	Quantum optimal control of multiple weakly interacting molecular rotors in the time-dependent Hartree approximation. Journal of Chemical Physics, 2019, 150, 164303.	3.0	5
30	Meshless Hermite-HDMR finite difference method for high-dimensional Dirichlet problems. Journal of Mathematical Chemistry, 2019, 57, 1652-1669.	1.5	2
31	Natureâ€™s Shortcut to Protein Folding. Journal of Physical Chemistry B, 2019, 123, 4463-4476.	2.6	12
32	Quantum control landscape of bipartite systems. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 165305.	2.1	6
33	Peak Annotation and Verification Engine for Untargeted LCâ€“MS Metabolomics. Analytical Chemistry, 2019, 91, 1838-1846.	6.5	72
34	Dual coherent and incoherent two-photon luminescence in single gold nanorods revealed by polarization and time-resolved nonlinear autocorrelation. Journal of the Optical Society of America B: Optical Physics, 2019, 36, 1931.	2.1	1
35	Data-driven gradient algorithm for high-precision quantum control. Physical Review A, 2018, 97, .	2.5	45
36	Optimal control of orientation and entanglement for two dipoleâ€“dipole coupled quantum planar rotors. Physical Chemistry Chemical Physics, 2018, 20, 13008-13029.	2.8	13

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37	Singularity-free quantum tracking control of molecular rotor orientation. Physical Review A, 2018, 98, .	2.5	16
38	Hysteresis control of epithelial-mesenchymal transition dynamics conveys a distinct program with enhanced metastatic ability. Nature Communications, 2018, 9, 5005.	12.8	144
39	Reply to comment on â€˜control landscapes are almost always trap free: a geometric assessmentâ€™. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 508002.	2.1	10
40	Predicting the location of the non-local contacts in Î±-synuclein. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2018, 1866, 1201-1208.	2.3	5
41	Controlling Qubit Networks in Polynomial Time. Physical Review Letters, 2018, 120, 220503.	7.8	14
42	Control landscapes for a class of non-linear dynamical systems: sufficient conditions for the absence of traps. Journal of Physics A: Mathematical and Theoretical, 2018, 51, 335103.	2.1	2
43	Shaped incoherent light for control of kinetics: Optimization of up-conversion hues in phosphors. Journal of Chemical Physics, 2018, 149, 054201.	3.0	5
44	Exact-exchange optimized effective potential and memory effect in time-dependent density functional theory. European Physical Journal B, 2018, 91, 1.	1.5	4
45	Dependence of the quantum speed limit on system size and control complexity. New Journal of Physics, 2018, 20, 063002.	2.9	14
46	High efficiency classification of children with autism spectrum disorder. PLoS ONE, 2018, 13, e0192867.	2.5	13
47	Quantum Ensemble Classification: A Sampling-Based Learning Control Approach. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 1345-1359.	11.3	22
48	High dimensional model representation constructed by support vector regression. I. Independent variables with known probability distributions. Journal of Mathematical Chemistry, 2017, 55, 278-303.	1.5	10
49	Exploring experimental fitness landscapes for chemical synthesis and property optimization. Physical Chemistry Chemical Physics, 2017, 19, 4266-4287.	2.8	10
50	Common foundations of optimal control across the sciences: evidence of a free lunch. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160210.	3.4	13
51	How to Make Distinct Dynamical Systems Appear Spectrally Identical. Physical Review Letters, 2017, 118, 083201.	7.8	20
52	Control landscapes are almost always trap free: a geometric assessment. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 205302.	2.1	27
53	Relationship between sensitivity indices defined by variance- and covariance-based methods. Reliability Engineering and System Safety, 2017, 167, 136-157.	8.9	34
54	Analytic Solutions to Coherent Control of the Dirac Equation. Physical Review Letters, 2017, 119, 173203.	7.8	7

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55	Pareto-front shape in multiobservable quantum control. Physical Review A, 2017, 95, .	2.5	2
56	Searching for an optimal control in the presence of saddles on the quantum-mechanical observable landscape. Physical Review A, 2017, 95, .	2.5	8
57	Gaining Mechanistic Insight with Control Pulse Slicing: Application to the Dissociative Ionization of CH₂Brl. Journal of Physical Chemistry A, 2017, 121, 8632-8641.	2.5	4
58	Time-Local Equation for the Exact Optimized Effective Potential in Time-Dependent Density Functional Theory. Physical Review Letters, 2017, 118, 243001.	7.8	14
59	On the fundamental conjecture of HDMR: a Fourier analysis approach. Journal of Mathematical Chemistry, 2017, 55, 632-660.	1.5	2
60	The roles of drift and control field constraints upon quantum control speed limits. New Journal of Physics, 2017, 19, 103015.	2.9	24
61	Fault tolerant filtering and fault detection for quantum systems driven by fields in single photon states. Journal of Mathematical Physics, 2016, 57, .	1.1	9
62	Optimal control protocols can be exponentially accelerated by quantum algorithms. , 2016, , .		2
63	Photonic reagents for concentration measurement of flu-orescent proteins with overlapping spectra. Scientific Reports, 2016, 6, 25827.	3.3	8
64	Theory of molecular conductance using a modular approach. Journal of Chemical Physics, 2016, 145, 234702.	3.0	13
65	Wignerâ€“Lindblad Equations for Quantum Friction. Journal of Physical Chemistry Letters, 2016, 7, 1632-1637.	4.6	16
66	Sampling-based robust control in synchronizing collision with shaped laser pulses: an application in charge transfer for H⁺ + D â†' H + D⁺. RSC Advances, 2016, 6, 92962-92969.	3.6	6
67	Survey of control performance in quantum information processing. Quantum Information Processing, 2016, 15, 4361-4390.	2.2	3
68	Quantum-control-landscape structure viewed along straight paths through the space of control fields. Physical Review A, 2016, 93, .	2.5	7
69	Identifying a cooperative control mechanism between an applied field and the environment of open quantum systems. Physical Review A, 2016, 93, .	2.5	5
70	Monotonic convergent quantum optimal control method with exact equality constraints on the optimized control fields. Physical Review A, 2016, 93, .	2.5	18
71	Optimal nonlinear coherent mode transitions in Bose-Einstein condensates utilizing spatiotemporal controls. Physical Review A, 2016, 93, .	2.5	12
72	Decoherence of a single spin coupled to an interacting spin bath. Physical Review B, 2016, 93, .	3.2	13

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73	Frequency domain quantum optimal control under multiple constraints. Physical Review A, 2016, 93, .	2.5	33
74	Macromolecular Crowding Facilitates the Conformational Transition of on-Pathway Molten Globule States of the Prion Protein. Journal of Physical Chemistry B, 2016, 120, 11093-11101.	2.6	6
75	Conductance and activation energy for electron transport in series and parallel intramolecular circuits. Physical Chemistry Chemical Physics, 2016, 18, 32087-32095.	2.8	12
76	Sampledâ€data design for robust control of open twoâ€level quantum systems with operator errors. IET Control Theory and Applications, 2016, 10, 2415-2421.	2.1	11
77	PEET: a Matlab tool for estimating physical gate errors in quantum information processing systems. Quantum Information Processing, 2016, 15, 3489-3518.	2.2	3
78	Stepping into the omics era: Opportunities and challenges for biomaterials science and engineering. Acta Biomaterialia, 2016, 34, 133-142.	8.3	88
79	On choosing the form of the objective functional for optimal control of molecules. Journal of Mathematical Chemistry, 2016, 54, 1-9.	1.5	7
80	Quantum control and pathway manipulation in rubidium. Physical Review A, 2015, 92, .	2.5	9
81	Efficient method to generate time evolution of the Wigner function for open quantum systems. Physical Review A, 2015, 92, .	2.5	35
82	Near-time-optimal control for quantum systems. Physical Review A, 2015, 92, .	2.5	18
83	Sparse and nonnegative sparse D-MORPH regression. Journal of Mathematical Chemistry, 2015, 53, 1885-1914.	1.5	4
84	Gate Control of Artificial Single-Molecule Electric Machines. Journal of Physical Chemistry C, 2015, 119, 4573-4579.	3.1	5
85	Experimental Design of Formulations Utilizing High Dimensional Model Representation. Journal of Physical Chemistry A, 2015, 119, 8237-8249.	2.5	8
86	Experimental observation of saddle points over the quantum control landscape of a two-spin system. Physical Review A, 2015, 91, .	2.5	15
87	Coherent light-driven electron transport through polycyclic aromatic hydrocarbon: laser frequency, field intensity, and polarization angle dependence. Physical Chemistry Chemical Physics, 2015, 17, 20617-20629.	2.8	6
88	Searching for quantum optimal controls under severe constraints. Physical Review A, 2015, 91, .	2.5	23
89	Molecular Series-Tunneling Junctions. Journal of the American Chemical Society, 2015, 137, 5948-5954.	13.7	30
90	Sampling-Based Learning Control for Quantum Systems With Uncertainties. IEEE Transactions on Control Systems Technology, 2015, 23, 2155-2166.	5.2	55

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91	Topology of classical molecular optimal control landscapes for multi-target objectives. Journal of Chemical Physics, 2015, 142, 154115.	3.0	6
92	Minimal time trajectories for two-level quantum systems with two bounded controls. Journal of Mathematical Physics, 2014, 55, .	1.1	19
93	Characterization of control noise effects in optimal quantum unitary dynamics. Physical Review A, 2014, 90, .	2.5	28
94	Assessment of optimal control mechanism complexity by experimental landscape Hessian analysis: fragmentation of CH₂BrI. New Journal of Physics, 2014, 16, 125004.	2.9	13
95	Experimental exploration over a quantum control landscape through nuclear magnetic resonance. Physical Review A, 2014, 89, .	2.5	20
96	Light-driven electron transport through a molecular junction based on cross-conjugated systems. Journal of Chemical Physics, 2014, 141, 124703.	3.0	17
97	Efficient retrieval of landscape Hessian: Forced optimal covariance adaptive learning. Physical Review E, 2014, 89, 063306.	2.1	17
98	Dynamic Dimensionality Identification for Quantum Control. Physical Review Letters, 2014, 112, 143001.	7.8	13
99	Pathway dynamics in the optimal quantum control of rubidium: Cooperation and competition. Physical Review A, 2014, 89, .	2.5	13
100	Searching for quantum optimal control fields in the presence of singular critical points. Physical Review A, 2014, 90, .	2.5	29
101	Characterization of the Critical Sets of Quantum Unitary Control Landscapes. IEEE Transactions on Automatic Control, 2014, 59, 2083-2098.	5.7	6
102	Sampling-based learning control for quantum discrimination and ensemble classification. , 2014, , .		0
103	Exploring the control landscape for nonlinear quantum dynamics. Physical Review A, 2014, 89, .	2.5	4
104	Sampling-based learning control of inhomogeneous quantum ensembles. Physical Review A, 2014, 89, .	2.5	92
105	Local topology at limited resource induced suboptimal traps on the quantum control landscape. Journal of Mathematical Chemistry, 2014, 52, 407-429.	1.5	7
106	Quantum optimal control pathways of ozone isomerization dynamics subject to competing dissociation: A two-state one-dimensional model. Journal of Chemical Physics, 2014, 140, 084305.	3.0	6
107	Analytical HDMR formulas for functions expressed as quadratic polynomials with a multivariate normal distribution. Journal of Mathematical Chemistry, 2014, 52, 2052-2073.	1.5	8
108	Optimal control of charge transfer for slow H+ + D collisions with shaped laser pulses. Journal of Chemical Physics, 2014, 140, 094304.	3.0	19

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109	Analysis of gene network robustness based on saturated fixed point attractors. Eurasip Journal on Bioinformatics and Systems Biology, 2014, 2014, 4.	1.4	5
110	Gate Control of the Conduction Mechanism Transition from Tunneling to Thermally Activated Hopping. Journal of Physical Chemistry Letters, 2014, 5, 1831-1836.	4.6	18
111	Flexibility damps macromolecular crowding effects on protein folding dynamics: Application to the murine prion protein (121â€“231). Chemical Physics Letters, 2014, 591, 207-211.	2.6	4
112	Laboratory transferability of optimally shaped laser pulses for quantum control. Journal of Chemical Physics, 2014, 140, 074302.	3.0	2
113	THEORETICAL FOUNDATIONS FOR EXPLORING QUANTUM OPTIMAL CONTROL OF MOLECULES. Advances in Multi-photon Processes and Spectroscopy, 2014, , 1-57.	0.6	2
114	Optimal control of molecular fragmentation with homologous families of photonic reagents and chemical substrates. Physical Chemistry Chemical Physics, 2013, 15, 18012.	2.8	20
115	Exploring quantum control landscape structure. Physical Review A, 2013, 88, .	2.5	12
116	The Gradient Flow for Control of Closed Quantum Systems. IEEE Transactions on Automatic Control, 2013, 58, 2665-2669.	5.7	10
117	Sampled-Data Design for Robust Control of a Single Qubit. IEEE Transactions on Automatic Control, 2013, 58, 2654-2659.	5.7	38
118	Single-Molecule Electric Revolving Door. Nano Letters, 2013, 13, 5020-5025.	9.1	25
119	A simple quantitative model of macromolecular crowding effects on protein folding: Application to the murine prion protein(121â€“231). Chemical Physics Letters, 2013, 574, 112-115.	2.6	9
120	Maximum attainable field-free molecular orientation of a thermal ensemble with nearâ€“single-cycle THz pulses. Physical Review A, 2013, 87, .	2.5	30
121	Topology of classical molecular optimal control landscapes in phase space. Journal of Chemical Physics, 2013, 138, 124114.	3.0	9
122	Systematic Trends in Photonic Reagent Induced Reactions in a Homologous Chemical Family. Journal of Physical Chemistry A, 2013, 117, 8205-8215.	2.5	9
123	Exploring control landscapes for laser-driven molecular fragmentation. Journal of Chemical Physics, 2013, 139, 144201.	3.0	11
124	Time-resolved quantum process tomography using Hamiltonian-encoding and observable-decoding. New Journal of Physics, 2013, 15, 025032.	2.9	18
125	Exploring the transition-probability-control landscape of open quantum systems: Application to a two-level case. Physical Review A, 2013, 88, .	2.5	16
126	Exploring constrained quantum control landscapes. Journal of Chemical Physics, 2012, 137, 134113.	3.0	65

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127	Dynamic homotopy and landscape dynamical set topology in quantum control. Journal of Mathematical Physics, 2012, 53, .	1.1	8
128	Sampled-data design for robust decoherence control of a single qubit. , 2012, , .		5
129	Exploring the tradeoff between fidelity and time optimal control of quantum unitary transformations. Physical Review A, 2012, 86, .	2.5	54
130	Singularities of quantum control landscapes. Physical Review A, 2012, 86, .	2.5	47
131	Single-Molecule Phenyl-Acetylene-Macrocycle-Based Optoelectronic Switch Functioning as a Quantum-Interference-Effect Transistor. Physical Review Letters, 2012, 109, 186801.	7.8	38
132	Comment on â€œAre There Traps in Quantum Control Landscapes?â€• Physical Review Letters, 2012, 108, 198901; author reply 198902.	7.8	29
133	Quantum control experiments as a testbed for evolutionary multi-objective algorithms. Genetic Programming and Evolvable Machines, 2012, 13, 445-491.	2.2	18
134	Control through operators for quantum chemistry. , 2012, , .		0
135	Global optimality of fitness landscapes in evolution. Chemical Science, 2012, 3, 900-906.	7.4	13
136	Hamiltonian Identification Through Enhanced Observability Utilizing Quantum Control. IEEE Transactions on Automatic Control, 2012, 57, 2679-2683.	5.7	15
137	D-MORPH regression for modeling with fewer unknown parameters than observation data. Journal of Mathematical Chemistry, 2012, 50, 1747-1764.	1.5	32
138	A scalable algorithm for molecular property estimation in high dimensional scaffold-based libraries. Journal of Mathematical Chemistry, 2012, 50, 1765-1790.	1.5	5
139	General formulation of HDMR component functions with independent and correlated variables. Journal of Mathematical Chemistry, 2012, 50, 99-130.	1.5	108
140	Critical Points of the Optimal Quantum Control Landscape: A Propagator Approach. Acta Applicandae Mathematicae, 2012, 118, 49-56.	1.0	4
141	Universal characteristics of chemical synthesis and property optimization. Chemical Science, 2011, 2, 417.	7.4	31
142	Why is chemical synthesis and property optimization easier than expected?. Physical Chemistry Chemical Physics, 2011, 13, 10048.	2.8	59
143	A perspective on controlling quantum phenomena. Faraday Discussions, 2011, 153, 415.	3.2	1
144	Search complexity and resource scaling for the quantum optimal control of unitary transformations. Physical Review A, 2011, 83, .	2.5	48

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145	Quantum state transformation by optimal projective measurements. Journal of Mathematical Chemistry, 2011, 49, 507-519.	1.5	6
146	A general formulation of monotonically convergent algorithms in the control of quantum dynamics beyond the linear dipole interaction. Computer Physics Communications, 2011, 182, 14-17.	7.5	20
147	Hamiltonian Reduction of Quantum Systems Controlled by Pulses. Chinese Journal of Chemical Physics, 2011, 24, 378-382.	1.3	0
148	Fast-kick-off monotonically convergent algorithm for searching optimal control fields. Physical Review A, 2011, 84, .	2.5	22
149	Exploring quantum control landscapes: Topology, features, and optimization scaling. Physical Review A, 2011, 84, .	2.5	46
150	Enhancing molecular discovery using descriptorâ€free rearrangement clustering techniques for sparse data sets. AICHE Journal, 2010, 56, 405-418.	3.6	1
151	Control of quantum phenomena: past, present and future. New Journal of Physics, 2010, 12, 075008.	2.9	761
152	Global Sensitivity Analysis for Systems with Independent and/or Correlated Inputs. Journal of Physical Chemistry A, 2010, 114, 6022-6032.	2.5	183
153	A network flow model for biclustering via optimal re-ordering of data matrices. Journal of Global Optimization, 2010, 47, 343-354.	1.8	12
154	D-MORPH regression: application to modeling with unknown parameters more than observation data. Journal of Mathematical Chemistry, 2010, 48, 1010-1035.	1.5	51
155	Environment-invariant measure of distance between evolutions of an open quantum system. New Journal of Physics, 2010, 12, 015001.	2.9	41
156	The canonical coset decomposition of unitary matrices through Householder transformations. Journal of Mathematical Physics, 2010, 51, 082101.	1.1	13
157	Optimal control landscape for the generation of unitary transformations with constrained dynamics. Physical Review A, 2010, 81, .	2.5	14
158	How Shaped Light Discriminates Nearly Identical Biochromophores. Physical Review Letters, 2010, 105, 073003.	7.8	57
159	PERFECT POPULATION TRANSFER IN PULSE-DRIVEN QUANTUM CHAINS. Journal of Theoretical and Computational Chemistry, 2010, 09, 847-860.	1.8	1
160	Multi-polarization quantum control of rotational motion through dipole coupling. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 105303.	2.1	8
161	Accelerated monotonic convergence of optimal control over quantum dynamics. Physical Review E, 2010, 82, 026703.	2.1	34
162	Low Entropic Barrier to the Hydrophobic Collapse of the Prion Protein: Effects of Intermediate States and Conformational Flexibility. Journal of Physical Chemistry A, 2010, 114, 6978-6982.	2.5	14

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163	Level sets of quantum control landscapes. , 2010, , .		1
164	Landscape of unitary transformations in controlled quantum dynamics. Physical Review A, 2009, 79, .	2.5	49
165	Quantum Control of Tightly Competitive Product Channels. Physical Review Letters, 2009, 102, 253001.	7.8	99
166	Gradient algorithm applied to laboratory quantum control. Physical Review A, 2009, 79, .	2.5	47
167	Accelerated optimization and automated discovery with covariance matrix adaptation for experimental quantum control. Physical Review A, 2009, 80, .	2.5	35
168	Controlling quantum systems in the presence of an environment. , 2009, , .		0
169	Optimal control of the local electromagnetic response of nanostructured materials: Optimal detectors and quantum disguises.. Applied Physics Letters, 2009, 94, .	3.3	9
170	Quantum optimal control of isomerization dynamics of a one-dimensional reaction-path model dominated by a competing dissociation channel. Journal of Chemical Physics, 2009, 131, 044306.	3.0	26
171	Experimental quantum control landscapes: Inherent monotonicity and artificial structure. Physical Review A, 2009, 80, .	2.5	28
172	Regularized random-sampling high dimensional model representation (RS-HDMR). Journal of Mathematical Chemistry, 2008, 43, 1207-1232.	1.5	59
173	Principles for determining mechanistic pathways from observable quantum control data. Journal of Mathematical Chemistry, 2008, 44, 142-171.	1.5	5
174	Control landscapes for observable preparation with open quantum systems. Journal of Mathematical Physics, 2008, 49, .	1.1	59
175	Coherent Control of Decoherence. Science, 2008, 320, 638-643.	12.6	97
176	Multicomponent control via shaped, strong laser fields mass spectrometry. Journal of Modern Optics, 2008, 55, 177-185.	1.3	8
177	OPTIMAL METHODS FOR RE-ORDERING DATA MATRICES IN SYSTEMS BIOLOGY AND DRUG DISCOVERY APPLICATIONS. Biophysical Reviews and Letters, 2008, 03, 19-42.	0.8	1
178	On the evolution of laser pulses under a dynamic Quantum Control environment. , 2008, , .		0
179	Quantum multiobservable control. Physical Review A, 2008, 77, .	2.5	17
180	Control of quantum dynamics by optimized measurements. Physical Review A, 2008, 78, .	2.5	35

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181	Optimal control landscape for the generation of unitary transformations. Physical Review A, 2008, 77, .	2.5	40
182	Development of laboratory and computational techniques for optimal and quantitative understanding of cellular metabolic networks. , 2008, , .		0
183	OPTIMAL METHODS FOR RE-ORDERING DATA MATRICES IN SYSTEMS BIOLOGY AND DRUG DISCOVERY APPLICATIONS. , 2008, , .		1
184	Quantum control landscapes. International Reviews in Physical Chemistry, 2007, 26, 671-735.	2.3	141
185	Control landscapes for observable preparation with open quantum systems. , 2007, , .		0
186	Fidelity of optimally controlled quantum gates with randomly coupled multiparticle environments. Journal of Modern Optics, 2007, 54, 2339-2349.	1.3	24
187	Vibrational and Rotational Collision Processes. Advances in Chemical Physics, 2007, , 271-304.	0.3	5
188	Sensitivity Analysis in Biomolecular Simulation. Reviews in Computational Chemistry, 2007, , 281-326.	1.5	11
189	Sensitivity Analysis and Its Role in Quantum Scattering Theory. Advances in Chemical Physics, 2007, , 177-226.	0.3	17
190	Why do effective quantum controls appear easy to find?. Journal of Photochemistry and Photobiology A: Chemistry, 2006, 180, 226-240.	3.9	116
191	Optimal Inputs for Phase Models of Spiking Neurons. Journal of Computational and Nonlinear Dynamics, 2006, 1, 358-367.	1.2	106
192	CHEMISTRY: Strong-Arming Molecular Dynamics. Science, 2006, 314, 264-265.	12.6	30
193	Optimal control landscapes for quantum observables. Journal of Chemical Physics, 2006, 124, 204107.	3.0	48
194	Assessing and managing laser system stability for quantum control experiments. Review of Scientific Instruments, 2006, 77, 083107.	1.3	6
195	Quantum control by von Neumann measurements. Physical Review A, 2006, 74, .	2.5	98
196	Exploring the level sets of quantum control landscapes. Physical Review A, 2006, 73, .	2.5	61
197	Teaching the environment to control quantum systems. Physical Review A, 2006, 73, .	2.5	82
198	Quantum observable homotopy tracking control. Journal of Chemical Physics, 2005, 123, 134104.	3.0	54

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199	Observable-preserving control of quantum dynamics over a family of related systems. Physical Review A, 2005, 72, .	2.5	75
200	Landscape for optimal control of quantum-mechanical unitary transformations. Physical Review A, 2005, 72, .	2.5	76
201	Perturbative and nonperturbative master equations for open quantum systems. Journal of Mathematical Physics, 2005, 46, 022105.	1.1	3
202	Controlling quantum phenomena: Why does it appear easy to achieve?. Journal of Modern Optics, 2004, 51, 2469-2475.	1.3	17
203	Quantum Optimally Controlled Transition Landscapes. Science, 2004, 303, 1998-2001.	12.6	347
204	On the Inversion of Quantum Mechanical Systems: Determining the Amount and Type of Data for a Unique Solution. Journal of Mathematical Chemistry, 2004, 35, 65-78.	1.5	8
205	Sequential Collapse Folding Pathway of Staphylococcal Nuclease:Â Entropic Activation Barriers to Hydrophobic Collapse of the Protein Core. Journal of Physical Chemistry B, 2004, 108, 8023-8030.	2.6	3
206	Mechanistic Analysis of Optimal Dynamic Discrimination of Similar Quantum Systems. Journal of Physical Chemistry A, 2004, 108, 4778-4785.	2.5	21
207	Generalized monotonically convergent algorithms for solving quantum optimal control problems. Journal of Chemical Physics, 2004, 120, 5509-5517.	3.0	124
208	The role of theory in the laboratory control of quantum dynamics phenomena. Theoretical Chemistry Accounts, 2003, 109, 64-70.	1.4	23
209	Relating contact order to the rate of cooperative collapse in the sequential collapse model for protein folding pathways. Chemical Physics Letters, 2003, 376, 612-617.	2.6	8
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