Tamiki Komatsuzaki

List of Publications by Year in Descending Order

96 papers	1,794 citations	25 h-index	38 g-index
104 ext. papers	1,972 ext. citations	4.8 avg, IF	4.77 L-index

#	Paper	IF	Citations
96	Richard Stephen Berry (1931–2020) **2022**, 27, 11-17		
95	Modes of information flow in collective cohesion.. *Science Advances*, **2022**, 8, eabj1720	14.3	1
94	Phase space geometry of isolated to condensed chemical reactions. *Journal of Chemical Physics*, **2021**, 155, 210901	3.9	2
93	Transfer entropy dependent on distance among agents in quantifying leader-follower relationships. *Biophysics and Physicobiology*, **2021**, 18, 131-144	1.4	1
92	Minor-embedding heuristics for large-scale annealing processors with sparse hardware graphs of up to 102,400 nodes. *Soft Computing*, **2021**, 25, 1731-1749	3.5	3
91	Classification Bandits: Classification Using Expected Rewards as Imperfect Discriminators. *Lecture Notes in Computer Science*, **2021**, 57-69	0.9	
90	An information-theoretic approach to infer the underlying interaction domain among elements from finite length trajectories in a noisy environment. *Journal of Chemical Physics*, **2021**, 154, 034901	3.9	3
89	An algorithm for computing phase space structures in chemical reaction dynamics using Voronoi tessellation. *Physica D: Nonlinear Phenomena*, **2021**, 133047	3.3	0
88	A Plenary Symposium in Memory of Prof. Fumio Oosawa 「Our Future of Biophysics」: A Scope of Next 50 Years」*Seibutsu Butsuri*, **2020**, 60, 122-122	0	
87	A bad arm existence checking problem: How to utilize asymmetric problem structure?. *Machine Learning*, **2020**, 109, 327-372	4	1
86	Inferring domain of interactions among particles from ensemble of trajectories. *Physical Review E*, **2020**, 102, 012404	2.4	4
85	Biophysical research in Hokkaido University, Japan. *Biophysical Reviews*, **2020**, 12, 233-236	3.7	0
84	High-Resolution Raman Microscopic Detection of Follicular Thyroid Cancer Cells with Unsupervised Machine Learning. *Journal of Physical Chemistry B*, **2019**, 123, 4358-4372	3.4	11
83	Raman spectroscopic histology using machine learning for nonalcoholic fatty liver disease. *FEBS Letters*, **2019**, 593, 2535-2544	3.8	8
82	Effects of non-equilibrium angle fluctuation on F-ATPase kinetics induced by temperature increase. *Physical Chemistry Chemical Physics*, **2018**, 20, 1872-1880	3.6	5
81	Deciphering hierarchical features in the energy landscape of adenylate kinase folding/unfolding. *Journal of Chemical Physics*, **2018**, 148, 123325	3.9	10
80	The Personality of Small Numbers: Do Molecules Have Personality? **2018**, 31-37		

79	Graph Minors from Simulated Annealing for Annealing Machines with Sparse Connectivity. *Lecture Notes in Computer Science*, **2018**, 111-123	0.9	3
78	Single Molecule Data Analysis: An Introduction. *Advances in Chemical Physics*, **2017**, 205-305		11
77	FRET monitoring of a nonribosomal peptide synthetase. *Nature Chemical Biology*, **2017**, 13, 1009-1015	11.7	18
76	Mechanical Shielding of Rapidly Growing Cells Buffers Growth Heterogeneity and Contributes to Organ Shape Reproducibility. *Current Biology*, **2017**, 27, 3468-3479.e4	6.3	52
75	Classification of Hamiltonians in neighborhoods of band crossings in terms of the theory of singularities. *Journal of Mathematical Physics*, **2017**, 58, 073502	1.2	0
74	Deciphering Time Scale Hierarchy in Reaction Networks. *Journal of Physical Chemistry B*, **2016**, 120, 1961-74	3.4	12
73	Extracting Subcellular Fibrillar Alignment with Error Estimation: Application to Microtubules. *Biophysical Journal*, **2016**, 110, 1836-1844	2.9	15
72	Variable Cell Growth Yields Reproducible OrganDevelopment through Spatiotemporal Averaging. *Developmental Cell*, **2016**, 38, 15-32	10.2	97
71	Breakdown mechanisms of normally hyperbolic invariant manifolds in terms of unstable periodic orbits and homoclinic/heteroclinic orbits in Hamiltonian systems. *Nonlinearity*, **2015**, 28, 2677-2698	1.7	13
70	Kinetic Analysis for the Multistep Profiles of Organic Reactions: Significance of the Conformational Entropy on the Rate Constants of the Claisen Rearrangement. *Journal of Physical Chemistry A*, **2015**, 119, 11641-9	2.8	26
69	Mechanism and Experimental Observability of Global Switching Between Reactive and Nonreactive Coordinates at High Total Energies. *Physical Review Letters*, **2015**, 115, 093003	7.4	11
68	Error-based extraction of states and energy landscapes from experimental single-molecule time-series. *Scientific Reports*, **2015**, 5, 9174	4.9	13
67	Understandings of chemical reaction dynamics in terms of dynamical systems theory **2015**,		1
66	ATP hydrolysis assists phosphate release and promotes reaction ordering in F1-ATPase. *Nature Communications*, **2015**, 6, 10223	17.4	18
65	Fast Step Transition and State Identification (STaSI) for Discrete Single-Molecule Data Analysis. *Journal of Physical Chemistry Letters*, **2014**, 5, 3157-3161	6.4	60
64	1P323 Dynamical heterogeneity and dynamics of cage breaking and formation in colloidal fluids(30. Miscellaneous topics,Poster,The 52nd Annual Meeting of the Biophysical Society of Japan(BSJ2014)). *Seibutsu Butsuri*, **2014**, 54, S194	0	
63	A new method to improve validity range of Lie canonical perturbation theory: with a central focus on a concept of non-blow-up region. *Theoretical Chemistry Accounts*, **2014**, 133, 1	1.9	1
62	Local-heterogeneous responses and transient dynamics of cage breaking and formation in colloidal fluids. *Journal of Chemical Physics*, **2014**, 141, 104907	3.9	2

61	Handling Noisy Data from Single Molecule Experiments. *Seibutsu Butsuri*, **2014**, 54, 257-258	0	1
60	2SAP-01 Molecular Individuality and Minority in Biology(Scenario of functions from minority and number fluctuations,Symposium,The 52th Annual Meeting of the Biophysical Society of Japan(BSJ2014)). *Seibutsu Butsuri*, **2014**, 54, S130	0	
59	Aggregated markov model using time series of single molecule dwell times with minimum excessive information. *Physical Review Letters*, **2013**, 111, 058301	7.4	20
58	Numerical construction of estimators for single-molecule fluorescence measurements. *Journal of Physical Chemistry B*, **2013**, 117, 8061-74	3.4	2
57	Non-Markovian properties and multiscale hidden Markovian network buried in single molecule time series. *Journal of Chemical Physics*, **2013**, 139, 245101	3.9	7
56	Time-resolved single molecule fluorescence spectroscopy of an α-chymotrypsin catalyzed reaction. *Journal of Physical Chemistry B*, **2013**, 117, 1252-60	3.4	15
55	Reactivity boundaries for chemical reactions associated with higher-index and multiple saddles. *Physical Review E*, **2013**, 88, 042923	2.4	17
54	Reactivity boundaries to separate the fate of a chemical reaction associated with an index-two saddle. *Physical Review E*, **2013**, 87, 062817	2.4	10
53	2SDA-07 Toward quantifying higher-order interactions among elements from molecular imaging(2SDA Biological functions derived from cooperation of a small number of molecules,Symposium,The 51th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2013**, 53, S95	0	
52	Laser Control of Chemical Reactions by Phase Space Structures. *Bulletin of the Chemical Society of Japan*, **2012**, 85, 854-861	5.1	4
51	Long-term observation of fluorescence of free single molecules to explore protein-folding energy landscapes. *Journal of the American Chemical Society*, **2012**, 134, 11525-32	16.4	17
50	Dynamic disorder in single-enzyme experiments: facts and artifacts. *ACS Nano*, **2012**, 6, 346-54	16.7	50
49	Multidimensional Energy Landscapes in Single-Molecule Biophysics. *Advances in Chemical Physics*, **2011**, 299-327		3
48	Quantum reaction boundary to mediate reactions in laser fields. *Journal of Chemical Physics*, **2011**, 134, 024317	3.9	22
47	Extracting the underlying effective free energy landscape from single-molecule time series--local equilibrium states and their network. *Physical Chemistry Chemical Physics*, **2011**, 13, 1395-406	3.6	14
46	2B1700 Roles of water for conformation changes of a peptide : water assisting/hindering mechanism(Water & Hydration & Electrolyte,The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2011**, 51, S77-S78	0	
45	2F1512 Mathematical Principles of Hierarchical Structures in Multivariate Stochastic Process(Mathematical biology 2,The 48th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2011**, 51, S83	0	
44	Dynamical Reaction Theory based on Geometric Structures in Phase Space. *Advances in Chemical Physics*, **2011**, 123-169		5

43	Why and how do systems react in thermally fluctuating environments?. *Physical Chemistry Chemical Physics*, **2011**, 13, 21217-29	3.6	12
42	Dynamical switching of a reaction coordinate to carry the system through to a different product state at high energies. *Physical Review Letters*, **2011**, 106, 054101	7.4	38
41	Phase space geometry of dynamics passing through saddle coupled with spatial rotation. *Journal of Chemical Physics*, **2011**, 134, 084304	3.9	7
40	Derivation of the generalized Langevin equation in nonstationary environments. *Journal of Chemical Physics*, **2011**, 134, 114523	3.9	26
39	Robust existence of a reaction boundary to separate the fate of a chemical reaction. *Physical Review Letters*, **2010**, 105, 048304	7.4	28
38	Dynamic reaction coordinate in thermally fluctuating environment in the framework of the multidimensional generalized Langevin equations. *Physical Chemistry Chemical Physics*, **2010**, 12, 15382-91	3.6	14
37	Hierarchy of reaction dynamics in a thermally fluctuating environment. *Physical Chemistry Chemical Physics*, **2010**, 12, 7626-35	3.6	15
36	Nonlinear dynamical effects on reaction rates in thermally fluctuating environments. *Physical Chemistry Chemical Physics*, **2010**, 12, 7636-47	3.6	13
35	Bifurcation of no-return transition states in many-body chemical reactions. *Journal of Chemical Physics*, **2009**, 130, 124116	3.9	27
34	Dynamic pathways to mediate reactions buried in thermal fluctuations. I. Time-dependent normal form theory for multidimensional Langevin equation. *Journal of Chemical Physics*, **2009**, 131, 224505	3.9	29
33	Dynamic pathways to mediate reactions buried in thermal fluctuations. II. Numerical illustrations using a model system. *Journal of Chemical Physics*, **2009**, 131, 224506	3.9	17
32	New quantification of local transition heterogeneity of multiscale complex networks constructed from single-molecule time series. *Journal of Physical Chemistry B*, **2009**, 113, 14732-41	3.4	18
31	3P-082 Statistical analysis of the mechanosensitive ion channel's dynamics(Membrane proteins,The 47th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2009**, 49, S165	0	
30	Multiscale complex network of protein conformational fluctuations in single-molecule time series. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 536-41	11.5	123
29	Exploring remnants of invariants buried in a deep potential well in chemical reactions. *Journal of Chemical Physics*, **2008**, 129, 094302	3.9	9
28	Probing remnants of invariants to mediate energy exchange in highly chaotic many-dimensional systems. *Physical Review E*, **2008**, 78, 017202	2.4	12
27	1S5-1 Multiscale Complex Network and Effective Free Energy Landscape Extracted from Single-Molecule Time Series(1S5 Linking single molecule spectroscopy and energy landscape perspectives,The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S4	0	
26	1S7-5 State Space Network extracted from Single Molecule Measurement : An illustration of Mechanosensitive ion channel MscL(1S7 Dynamic Picture of Ion Channel upon Gating,The 46th Annual Meeting of the Biophysical Society of Japan). *Seibutsu Butsuri*, **2008**, 48, S6	0	

25	Dynamical foundation and limitations of statistical reaction theory. *Communications in Nonlinear Science and Numerical Simulation*, **2008**, 13, 857-867	3.7	13
24	Dimension reduction for extracting geometrical structure of multidimensional phase space: Application to fast energy exchange in the reaction O(D1)+N2O-NO+NO. *Physical Review A*, **2007**, 75,	2.6	12
23	Anomalous diffusion in folding dynamics of minimalist protein landscape. *Physical Review Letters*, **2007**, 99, 238103	7.4	17
22	Fractional behavior in multidimensional Hamiltonian systems describing reactions. *Physical Review E*, **2007**, 76, 056205	2.4	26
21	Construction of effective free energy landscape from single-molecule time series. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 19297-302	11.5	66
20	Development of a technique for the investigation of folding dynamics of single proteins for extended time periods. *Proceedings of the National Academy of Sciences of the United States of America*, **2007**, 104, 10453-8	11.5	42
19	Definability of no-return transition states in the high-energy regime above the reaction threshold. *Physical Review Letters*, **2006**, 97, 028302	7.4	60
18	Topographical complexity of multidimensional energy landscapes. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 18551-5	11.5	32
17	1P539 Applicability of local ergodic state analysis of single molecule time series(26. Single molecule biophysics,Poster Session,Abstract,Meeting Program of EABS & BSJ 2006). *Seibutsu Butsuri*, **2006**, 46, S281	0	
16	Wavelet analysis and Arnold web picture for detecting energy transfer in a Hamiltonian dynamical system. *Laser Physics*, **2006**, 16, 1097-1106	1.2	9
15	Phase-space reaction network on a multisaddle energy landscape: HCN isomerization. *Journal of Chemical Physics*, **2005**, 123, 184301	3.9	37
14	Regularity in Chaotic Transitions on Two-Basin Landscapes. *Advances in Chemical Physics*, **2005**, 143-170		15
13	Chemical Reaction Dynamics: Many-Body Chaos and Regularity. *Advances in Chemical Physics*, **2003**, 79-152		46
12	A Dynamical Propensity Rule for Transitions in Chemical Reactions *Journal of Physical Chemistry A*, **2002**, 106, 10945-10950	2.8	23
11	Multibasin Dynamics in Off-Lattice Minimalist Protein Landscapes *Journal of Physical Chemistry A*, **2002**, 106, 10898-10907	2.8	12
10	Dynamical hierarchy in transition states: why and how does a system climb over the mountain?. *Proceedings of the National Academy of Sciences of the United States of America*, **2001**, 98, 7666-71	11.5	75
9	Regularity in chaotic reaction paths III: Ar6 local invariances at the reaction bottleneck. *Journal of Chemical Physics*, **2001**, 115, 4105-4117	3.9	27
8	Local regularity and non-recrossing path in transition state new strategy in chemical reaction theories. *Computational and Theoretical Chemistry*, **2000**, 506, 55-70		38

7	Regularity in chaotic reaction paths. I. Ar6. *Journal of Chemical Physics*, **1999**, 110, 9160-9173	3.9	99
6	Regularity in chaotic reaction paths II: Ar6. Energy dependence and visualization of the reaction bottleneck. *Physical Chemistry Chemical Physics*, **1999**, 1, 1387-1397	3.6	31
5	Electronic spectra of ion pairs of picrate ion withalkali-metal polyether complexes in non-aqueoussolvents. *Journal of the Chemical Society, Faraday Transactions*, **1997**, 93, 1903-1908		9
4	A dividing surface free from a barrier recrossing motion in many-body systems. *Chemical Physics Letters*, **1997**, 265, 91-98	2.5	24
3	Study on □egularity□of barrier recrossing motion. *Journal of Chemical Physics*, **1996**, 105, 10838-10848	3.9	30
2	Proton Transfer in Liquid Water II; A Semiempirical Method to Describe Chemical Reactions. *Molecular Simulation*, **1996**, 16, 321-344	2	6
1	Energetics of proton transfer in liquid water. I. Ab initio study for origin of many-body interaction and potential energy surfaces. *Chemical Physics*, **1994**, 180, 239-269	2.3	65