

Kazuhiko Seki

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2326516/publications.pdf>

Version: 2024-02-01

129
papers

3,986
citations

201575

27
h-index

133188

59
g-index

132
all docs

132
docs citations

132
times ranked

4244
citing authors

#	ARTICLE	IF	CITATIONS
1	Design Predictions of n Heterojunction Based Photoanode for Efficient Unbiased Overall Solar Water Splitting. <i>Energy Technology</i> , 2022, 10, 2100570.	1.8	5
2	Thermoelectrochemical Cells Based on Ferricyanide/Ferrocyanide/Guanidinium: Application and Challenges. <i>ACS Applied Materials & Interfaces</i> , 2022, , .	4.0	7
3	Thickness optimization of the output power and effective thermoelectric figure of merit of thin thermoelectric generator. <i>Japanese Journal of Applied Physics</i> , 2022, 61, 080903.	0.8	0
4	Probing fundamental losses in nanostructured Ta ₃ N ₅ photoanodes: design principles for efficient water oxidation. <i>Energy and Environmental Science</i> , 2021, 14, 4038-4047.	15.6	31
5	Geminate Delayed Fluorescence by Anisotropic Diffusion-Mediated Reversible Singlet Fission and Triplet Fusion. <i>Journal of Physical Chemistry C</i> , 2021, 125, 3295-3304.	1.5	6
6	Effective constriction resistance for isotropic and anisotropic film conductors. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 195302.	1.3	1
7	An exact solution in the theory of fluorescence resonance energy transfer with vibrational relaxation. <i>Journal of Chemical Physics</i> , 2021, 154, 134104.	1.2	3
8	Determining interfacial resistance in thermoelectrochemical cells using transmission line measurement. <i>Applied Physics Letters</i> , 2021, 118, .	1.5	2
9	On the definition of the domain growth-rate constant on a two-dimensional substrate. <i>Journal of Crystal Growth</i> , 2021, 570, 126222.	0.7	1
10	The sputter-based synthesis of tantalum oxynitride nanoparticles with architecture and bandgap controlled by design. <i>Applied Surface Science</i> , 2021, 559, 149974.	3.1	11
11	Insight into the effect of the configuration entropy of additives on the Seebeck coefficient. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 14803-14810.	1.3	5
12	Theoretical study of spreading resistance using anisotropic conductivity parameters for graphene: a comparative study against conventional isotropic conductors. <i>Japanese Journal of Applied Physics</i> , 2021, 60, 015503.	0.8	1
13	Unveiling charge dynamics of visible light absorbing oxysulfide for efficient overall water splitting. <i>Nature Communications</i> , 2021, 12, 7055.	5.8	31
14	Quantifying the spreading resistance of an anisotropic thin film conductor. <i>Scientific Reports</i> , 2020, 10, 10633.	1.6	9
15	Charge Transport in Disordered Organic Solids: Refining the Bässler Equation with High-Precision Simulation Results. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17879-17888.	1.5	3
16	Photocatalytic water splitting with a quantum efficiency of almost unity. <i>Nature</i> , 2020, 581, 411-414.	13.7	1,227
17	Ta ₃ N ₅ -Nanorods enabling highly efficient water oxidation <i>via</i> advantageous light harvesting and charge collection. <i>Energy and Environmental Science</i> , 2020, 13, 1519-1530.	15.6	80
18	Development of a Core-Shell Heterojunction Ta ₃ N ₅ -Nanorods/BaTaO ₂ N Photoanode for Solar Water Splitting. <i>ACS Energy Letters</i> , 2020, 5, 2492-2497.	8.8	58

#	ARTICLE	IF	CITATIONS
19	Theoretical perspective of performance-limiting parameters of Cu(In _x Ga _{1-x})Se ₂ -based photocathodes. Journal of Materials Chemistry A, 2020, 8, 9194-9201.	5.2	11
20	Quantifying the spreading currents over the circular contact region in a good conducting cover layer on a substrate. Journal Physics D: Applied Physics, 2020, 53, 435103.	1.3	2
21	Fabrication of layer-by-layer graphene oxide thin film on copper substrate by electrophoretic deposition. Japanese Journal of Applied Physics, 2020, 59, 125001.	0.8	5
22	Transparent Ta ₃ N ₅ Photoanodes for Efficient Oxygen Evolution toward the Development of Tandem Cells. Angewandte Chemie, 2019, 131, 2322-2326.	1.6	9
23	Scaling theory for two-dimensional single domain growth driven by attachment of diffusing adsorbates. New Journal of Physics, 2019, 21, 093059.	1.2	3
24	Simulation Study of the Effects of Nanoporous Structures on Mechanical Properties at Polymer-Metal Interfaces. Journal of Physical Chemistry B, 2019, 123, 1161-1170.	1.2	9
25	Revealing the role of the Rh valence state, La doping level and Ru cocatalyst in determining the H ₂ evolution efficiency in doped SrTiO ₃ photocatalysts. Sustainable Energy and Fuels, 2019, 3, 208-218.	2.5	56
26	Transient Absorption Spectroscopy Reveals Performance-Limiting Factors in a Narrow-Bandgap Oxysulfide La ₅ (Ti _{0.99} Mg _{0.01}) ₂ CuS ₅ O _{6.99} Photocatalyst for H ₂ Generation. Journal of Physical Chemistry C, 2019, 123, 14246-14252.	1.5	6
27	Motional narrowing under Markovian and non-Markovian hopping transitions in inhomogeneous broadened absorption line shape. Physical Review E, 2019, 99, 052115.	0.8	1
28	Origin of the overall water splitting activity of Ta ₃ N ₅ revealed by ultrafast transient absorption spectroscopy. Chemical Science, 2019, 10, 5353-5362.	3.7	57
29	Transparent Ta ₃ N ₅ Photoanodes for Efficient Oxygen Evolution toward the Development of Tandem Cells. Angewandte Chemie - International Edition, 2019, 58, 2300-2304.	7.2	75
30	Possible influence of the Kuramoto length in a photo-catalytic water splitting reaction revealed by Poisson-Nernst-Planck equations involving ionization in a weak electrolyte. Chemical Physics, 2018, 502, 39-49.	0.9	2
31	Plate-like Sm ₂ Ti ₂ S ₂ O ₅ Particles Prepared by a Flux-Assisted One-Step Synthesis for the Evolution of O ₂ from Aqueous Solutions by Both Photocatalytic and Photoelectrochemical Reactions. Journal of Physical Chemistry C, 2018, 122, 13492-13499.	1.5	18
32	Diffusion-Mediated Delayed Fluorescence by Singlet Fission and Geminate Fusion of Correlated Triplets. Journal of Physical Chemistry C, 2018, 122, 11659-11670.	1.5	13
33	Jellium Edge and Size Effect of Chemical Potential and Surface Energy in Metal Slabs. Journal of the Physical Society of Japan, 2018, 87, 124707.	0.7	2
34	Particulate Photocatalyst Sheets Based on Carbon Conductor Layer for Efficient Z-Scheme Pure-Water Splitting at Ambient Pressure. Journal of the American Chemical Society, 2017, 139, 1675-1683.	6.6	322
35	Simulation Study of the Effect of the Side-Chain Structure on the Initial Nucleation Process of Polythiophene Derivatives. Journal of Physical Chemistry B, 2017, 121, 1108-1117.	1.2	10
36	Geminate electron-hole recombination in organic photovoltaic cells. A semi-empirical theory. Journal of Chemical Physics, 2017, 146, 054101.	1.2	20

#	ARTICLE	IF	CITATIONS
37	Direct Aqueous Dispersion of Carbon Nanotubes Using Nanoparticle-Formed Fullerenes and Self-Assembled Formation of p/n Heterojunctions with Polythiophene. ACS Omega, 2017, 2, 1625-1632.	1.6	10
38	Electric Field-Assisted Dissociation Yield of Bound Charge Pairs in Low Permittivity Materials. Journal of Physical Chemistry C, 2017, 121, 3632-3641.	1.5	6
39	Enhancement of Charge Separation and Hydrogen Evolution on Particulate La ₅ Ti ₂ CuS ₅ O ₇ Photocathodes by Surface Modification. Journal of Physical Chemistry Letters, 2017, 8, 375-379.	2.1	17
40	Rational Interpretation of Correlated Kinetics of Mobile and Trapped Charge Carriers: Analysis of Ultrafast Carrier Dynamics in BiVO ₄ . Journal of Physical Chemistry C, 2017, 121, 19044-19052.	1.5	39
41	Anomalous dimensionality dependence of diffusion in a rugged energy landscape: How pathological is one dimension?. Journal of Chemical Physics, 2016, 144, 194106.	1.2	11
42	Equivalent circuit representation of hysteresis in solar cells that considers interface charge accumulation: Potential cause of hysteresis in perovskite solar cells. Applied Physics Letters, 2016, 109, .	1.5	23
43	Rationalizing long-lived photo-excited carriers in photocatalyst (La ₅ Ti ₂ CuS ₅ O ₇) in terms of one-dimensional carrier transport. Chemical Physics, 2016, 476, 9-16.	0.9	11
44	Temperature scaling of effective polaron mobility in energetically disordered media. Journal of Chemical Physics, 2016, 145, 034106.	1.2	3
45	Effects of surface affinity on the ordering dynamics of self-assembled monolayers of chain molecules: Transition from a parallel to a perpendicular structure. Physical Review E, 2015, 91, 052604.	0.8	4
46	Transition from distributional to ergodic behavior in an inhomogeneous diffusion process: Method revealing an unknown surface diffusivity. Physical Review E, 2015, 92, 022114.	0.8	8
47	Relationship between entropy and diffusion: A statistical mechanical derivation of Rosenfeld expression for a rugged energy landscape. Journal of Chemical Physics, 2015, 143, 194110.	1.2	37
48	Coil-globule transition of a polymer involved in excluded-volume interactions with macromolecules. Journal of Chemical Physics, 2015, 143, 134903.	1.2	7
49	Diffusion Influenced Adsorption Kinetics. Journal of Physical Chemistry B, 2015, 119, 10954-10961.	1.2	27
50	Kinetics of Distance-Dependent Recombination between Geminate Charge Carriers by Diffusion under Coulomb Interaction. Journal of Physical Chemistry C, 2015, 119, 5364-5373.	1.5	26
51	Formation of Hydroxyapatite Skeletal Materials from Hydrogel Matrices via Artificial Biomineralization. Journal of Physical Chemistry B, 2015, 119, 8793-8799.	1.2	21
52	Theoretical limit of power conversion efficiency for organic and hybrid halide perovskite photovoltaics. Japanese Journal of Applied Physics, 2015, 54, 08KF04.	0.8	22
53	Photoanodic and photocathodic behaviour of La ₅ Ti ₂ CuS ₅ O ₇ electrodes in the water splitting reaction. Chemical Science, 2015, 6, 4513-4518.	3.7	36
54	Durable hydrogen evolution from water driven by sunlight using (Ag,Cu)GaSe ₂ photocathodes modified with CdS and CuGa ₃ Se ₅ . Chemical Science, 2015, 6, 894-901.	3.7	89

#	ARTICLE	IF	CITATIONS
55	Diffusion coefficients in leaflets of bilayer membranes. <i>Physical Review E</i> , 2014, 89, 022713.	0.8	13
56	Diffusion on a rugged energy landscape with spatial correlations. <i>Journal of Chemical Physics</i> , 2014, 141, 124105.	1.2	27
57	Overall current-voltage characteristics of space charge controlled currents for thin films by a single carrier species. <i>Journal of Applied Physics</i> , 2014, 116, 063716.	1.1	9
58	Effect of energetic disorder on the open-circuit voltage in organic bulk heterojunction composites. <i>Japanese Journal of Applied Physics</i> , 2014, 53, 01AB13.	0.8	2
59	Response to "Comment on "Detailed balance limit of power conversion efficiency for organic photovoltaics" [Appl. Phys. Lett. 104, 146101 (2014)]. <i>Applied Physics Letters</i> , 2014, 104, 146102.	1.5	0
60	Trapped State Sensitive Kinetics in LaTiO ₂ N Solid Photocatalyst with and without Cocatalyst Loading. <i>Journal of the American Chemical Society</i> , 2014, 136, 17324-17331.	6.6	70
61	Theoretical Limits of Power Conversion Efficiency for Organic Photovoltaic Cells. <i>Hyomen Kagaku</i> , 2014, 35, 595-602.	0.0	2
62	Bulk Recombination in Organic Bulk Heterojunction Solar Cells under Continuous and Pulsed Light Irradiation. <i>Applied Physics Express</i> , 2013, 6, 051603.	1.1	11
63	Growth kinetics of circular liquid domains on vesicles by diffusion-controlled coalescence. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 195105.	0.7	2
64	Detailed balance limit of power conversion efficiency for organic photovoltaics. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	14
65	Lateral Dynamics in Polymer-Supported Membranes. <i>Materials</i> , 2012, 5, 1923-1932.	1.3	7
66	Diffusion-mediated geminate reactions under excluded volume interactions. <i>Physical Review E</i> , 2012, 85, 011131.	0.8	6
67	Viscoelasticity of two-layer vesicles in solution. <i>Physical Review E</i> , 2012, 86, 061401.	0.8	2
68	Anomalous lateral diffusion in a viscous membrane surrounded by viscoelastic media. <i>Europhysics Letters</i> , 2012, 97, 68007.	0.7	16
69	Ring formation by competition between entropic effect and thermophoresis. <i>Soft Matter</i> , 2012, 8, 6775.	1.2	5
70	Site Blocking Effect on Diffusion-Mediated Reactions in Porous Media. <i>Journal of Physical Chemistry C</i> , 2012, 116, 22086-22093.	1.5	2
71	Dynamics of Heterogeneity in Fluid Membranes. <i>Behavior Research Methods</i> , 2012, , 129-164.	2.3	2
72	Hydrodynamic effects on concentration fluctuations in multicomponent membranes. <i>Soft Matter</i> , 2011, 7, 1524.	1.2	19

#	ARTICLE	IF	CITATIONS
73	Dynamics of a polymer chain confined in a membrane. <i>European Physical Journal E</i> , 2011, 34, 46.	0.7	29
74	Diffusion coefficient of an inclusion in a liquid membrane supported by a solvent of arbitrary thickness. <i>Physical Review E</i> , 2011, 84, 021905.	0.8	21
75	Effects of excluded volume interaction and dimensionality on diffusion-mediated reactions. <i>Journal of Chemical Physics</i> , 2011, 134, 094506.	1.2	16
76	Drag coefficient of a liquid domain in a two-dimensional membrane. <i>European Physical Journal E</i> , 2010, 31, 303-310.	0.7	25
77	Photoisomerization kinetics in solid states: Origin of induction period. <i>Chemical Physics Letters</i> , 2010, 495, 218-221.	1.2	2
78	Molecular dynamics study of the effects of chain properties on the order formation dynamics of self-assembled monolayers of long-chain molecules. <i>Physical Review E</i> , 2010, 81, 021801.	0.8	5
79	Theory of bulk electron-hole recombination in a medium with energetic disorder. <i>Physical Review B</i> , 2010, 82, .	1.1	91
80	Reaction under vacancy-assisted diffusion at high quencher concentration. <i>Physical Review E</i> , 2009, 80, 041120.	0.8	9
81	Theory of antibunching of photon emission I. <i>Journal of Chemical Physics</i> , 2009, 130, 024706.	1.2	7
82	Theory of antibunching of photon emission II. <i>Journal of Chemical Physics</i> , 2009, 130, 194507.	1.2	2
83	Theoretical study on photon emission statistics from single conjugated polymer molecules excited by laser pulses. <i>Synthetic Metals</i> , 2009, 159, 769-772.	2.1	0
84	Unified explanation of the fluorescence decay and blinking characteristics of semiconductor nanocrystals. <i>Applied Physics Letters</i> , 2009, 94, 081104.	1.5	22
85	Dynamics of Barrierless and Activated Chemical Reactions in a Dispersive Medium within the Fractional Diffusion Equation Approach. <i>Journal of Physical Chemistry B</i> , 2008, 112, 6107-6113.	1.2	7
86	Orientalional relaxation in a dispersive dynamic medium: Generalization of the Kubo-Ivanov-Anderson jump-diffusion model to include fractional environmental dynamics. <i>Physical Review E</i> , 2008, 77, 031505.	0.8	14
87	Nonequilibrium thermodynamic study of magnetization dynamics in the presence of spin-transfer torque. <i>Physical Review B</i> , 2008, 78, .	1.1	7
88	Theoretical model based on the memory effect for the strange photoisomerization kinetics of diarylethene derivatives dispersed on polymer films. <i>Journal of Chemical Physics</i> , 2007, 126, 044904.	1.2	4
89	Subdiffusion-assisted reaction kinetics in disordered media. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 065116.	0.7	3
90	Molecular dynamics study of crystallization of polymer systems confined in small nanodomains. <i>Physical Review E</i> , 2007, 75, 031804.	0.8	33

#	ARTICLE	IF	CITATIONS
91	Specific features of the kinetics of fractional-diffusion assisted geminate reactions. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 065117.	0.7	14
92	Concentration fluctuations in binary fluid membranes. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 072101.	0.7	21
93	Energy Gap Law of Electron Transfer in Nonpolar Solvents. <i>Journal of Physical Chemistry A</i> , 2007, 111, 9553-9559.	1.1	18
94	Dispersive-diffusion-controlled distance-dependent recombination in amorphous semiconductors. <i>Journal of Chemical Physics</i> , 2006, 124, 044702.	1.2	10
95	Photo-driven directional motion of droplets on the surface of a liquid crystal doped with photochromic azobenzene: theory. <i>Journal of Physics Condensed Matter</i> , 2005, 17, S4229-S4237.	0.7	2
96	A Theoretical Method to Analyze Diffusion of Probe Molecules in Nanostructured Fluids by Fluorescence Correlation Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2005, 109, 2421-2427.	1.1	5
97	Dispersive photoluminescence decay by geminate recombination in amorphous semiconductors. <i>Physical Review B</i> , 2005, 71, .	1.1	15
98	Kinetics of Photoinduced Hydrophilic Conversion Processes of TiO ₂ Surfaces. <i>Journal of Physical Chemistry B</i> , 2004, 108, 4806-4810.	1.2	42
99	Fractional reaction-diffusion equation. <i>Journal of Chemical Physics</i> , 2003, 119, 2165-2170.	1.2	166
100	Rigorous calculation of electric field effects on the free energy change of the electron transfer reaction. <i>Journal of Chemical Physics</i> , 2003, 118, 669-679.	1.2	18
101	Simulation study of the order formation dynamics in the melt crystallization of flexible chain molecules induced by rigid molecular nuclei. <i>Journal of Chemical Physics</i> , 2003, 119, 6354-6360.	1.2	10
102	Recombination kinetics in subdiffusive media. <i>Journal of Chemical Physics</i> , 2003, 119, 7525-7533.	1.2	70
103	Solvent Effects in Nonadiabatic Electron-Transfer Reactions: Theoretical Aspects. <i>Advances in Chemical Physics</i> , 2003, , 511-616.	0.3	64
104	Diffusion-assisted long-range reaction between the ends of a polymer: Effective sink approximation. <i>Journal of Chemical Physics</i> , 2002, 117, 1377-1384.	1.2	15
105	Kinetics of diffusion-assisted reactions in microheterogeneous systems. <i>Advances in Colloid and Interface Science</i> , 2001, 89-90, 47-140.	7.0	46
106	Electric field dependence of charge mobility in energetically disordered materials: Polaron aspects. <i>Physical Review B</i> , 2001, 65, .	1.1	45
107	Mean field theory of viscoelasticity of nondilute vesicle dispersions. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	0
108	Theoretical analysis of the influence of stochastic gating on the transient effect in fluorescence quenching by electron transfer. <i>Journal of Chemical Physics</i> , 2000, 112, 2849-2862.	1.2	11

#	ARTICLE	IF	CITATIONS
109	Diffusion-assisted reaction through a fluctuating bottleneck. <i>Journal of Chemical Physics</i> , 2000, 113, 3441-3446.	1.2	7
110	Diffusion-assisted long-range reactions in confined systems: Projection operator approach. <i>Journal of Chemical Physics</i> , 1999, 110, 7639-7649.	1.2	36
111	Theory of Diffusion-Assisted Reactions on Micelle Surfaces: Photoinduced Electron Transfer Followed by Back Transfer. <i>Journal of Physical Chemistry B</i> , 1999, 103, 9156-9160.	1.2	21
112	Theory of Diffusion-Assisted Reactions on Micelle Surfaces: Exact Results and Approximations for the Kinetics of Reactions between Neutral Species. <i>Journal of Physical Chemistry B</i> , 1999, 103, 6881-6885.	1.2	4
113	Brownian motion of spins revisited. <i>Journal of Chemical Physics</i> , 1998, 108, 7052-7059.	1.2	31
114	Periodically driven linear system with multiplicative colored noise. <i>Physical Review E</i> , 1998, 57, 6555-6563.	0.8	68
115	Stochastic resonance driven by Gaussian multiplicative noise. <i>Europhysics Letters</i> , 1997, 40, 117-122.	0.7	69
116	Reorientational dynamics of an electric dipole in fluctuating electric fields. <i>Journal of Chemical Physics</i> , 1996, 105, 4274-4283.	1.2	1
117	Spatial correlations in reaction-diffusion systems in nonequilibrium conditions. <i>Studies in Physical and Theoretical Chemistry</i> , 1995, 83, 293-296.	0.0	0
118	Microscopic reversibility of the rate constants given by the generalized Marcus equation. <i>Chemical Physics Letters</i> , 1995, 243, 330-333.	1.2	5
119	Spatial correlations in reaction-diffusion systems in nonequilibrium conditions. <i>Journal of Molecular Liquids</i> , 1995, 65-66, 293-296.	2.3	2
120	Viscoelasticity of vesicle dispersions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1995, 219, 253-289.	1.2	18
121	Diffusion Constant of a Polymer Chain in Biomembranes. <i>Journal De Physique II</i> , 1995, 5, 5-9.	0.9	47
122	Relative spatial diffusion in turbulent media. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1994, 209, 369-384.	1.2	5
123	Dynamical fluctuations of spherically closed fluid membranes. <i>Physica A: Statistical Mechanics and Its Applications</i> , 1993, 192, 27-46.	1.2	30
124	Sensitivity to initial conditions in stochastic systems. <i>Physical Review E</i> , 1993, 47, 155-163.	0.8	9
125	Brownian dynamics in a thin sheet with momentum decay. <i>Physical Review E</i> , 1993, 47, 2377-2383.	0.8	26
126	Growth mechanisms of silica glasses using the liquid phase deposition (LPD). <i>Journal of Non-Crystalline Solids</i> , 1992, 151, 102-108.	1.5	22

#	ARTICLE	IF	CITATIONS
127	On the Spatial Correlations in Nonequilibrium Systems. Journal of the Physical Society of Japan, 1990, 59, 2309-2311.	0.7	8
128	Transition from Reaction- to Diffusion-Limited Growth of Graphene by Chemical Vapor Deposition. Crystal Growth and Design, 0, , .	1.4	0
129	Local charge carrier dynamics of a particulate Ga-doped La ₅ Ti ₂ Cu _{0.9} Ag _{0.1} O ₇ S ₅ photocatalyst and the impact of Rh cocatalysts. Physical Chemistry Chemical Physics, 0, , .	1.3	0