

# Katharina Krischer

## List of Publications by Year in descending order

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90  
papers

2,514  
citations

186265  
28  
h-index

214800  
47  
g-index

99  
all docs

99  
docs citations

99  
times ranked

1204  
citing authors

#	ARTICLE	IF	CITATIONS
1	Coexistence of synchrony and incoherence in oscillatory media under nonlinear global coupling. <i>Chaos</i> , 2014, 24, 013102.	2.5	256
2	Turing-Type Patterns on Electrode Surfaces. <i>Science</i> , 2001, 291, 2395-2398.	12.6	159
3	A classification scheme for chimera states. <i>Chaos</i> , 2016, 26, 094815.	2.5	144
4	Clustering as a Prerequisite for Chimera States in Globally Coupled Systems. <i>Physical Review Letters</i> , 2015, 114, 034101.	7.8	121
5	The complex Ginzburg-Landau equation: an introduction. <i>Contemporary Physics</i> , 2012, 53, 79-95.	1.8	98
6	Fronts, Waves, and Stationary Patterns in Electrochemical Systems. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 850-869.	13.8	86
7	Spontaneous formation of spatiotemporal patterns at the electrode-electrolyte interface. <i>Journal of Electroanalytical Chemistry</i> , 2001, 501, 1-21.	3.8	84
8	Tuning the range of spatial coupling in electrochemical systems: From local via nonlocal to global coupling. <i>Physical Review E</i> , 1997, 55, 2260-2266.	2.1	82
9	Self-organized alternating chimera states in oscillatory media. <i>Scientific Reports</i> , 2015, 5, 9883.	3.3	56
10	Pattern Formation in Globally Coupled Electrochemical Systems with an S-Shaped Current-Potential Curve. <i>Journal of Physical Chemistry B</i> , 2000, 104, 7545-7553.	2.6	53
11	A Theoretical Study on Turing Patterns in Electrochemical Systems. <i>Journal of Physical Chemistry B</i> , 2000, 104, 6081-6090.	2.6	52
12	Synchronization and Pattern Formation in Electrochemical Oscillators: Model Calculations. <i>Journal of Physical Chemistry B</i> , 1997, 101, 2403-2410.	2.6	48
13	Chimeras in globally coupled oscillatory systems: From ensembles of oscillators to spatially continuous media. <i>Chaos</i> , 2015, 25, 064401.	2.5	47
14	Transitions to Electrochemical Turbulence. <i>Physical Review Letters</i> , 2005, 94, 174104.	7.8	46
15	Stationary Potential Patterns during the Reduction of Peroxodisulfate at Ag Ring Electrodes. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10264-10271.	2.6	45
16	Pattern formation during the oscillatory photoelectrodissolution of n-type silicon: turbulence, clusters and chimeras. <i>New Journal of Physics</i> , 2014, 16, 063024.	2.9	44
17	Pattern Formation during CO Electrooxidation on Thin Pt Films Studied with Spatially Resolved Infrared Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2008, 112, 9548-9551.	3.1	43
18	Nonlinear phenomena during electrochemical oxidation of hydrogen on platinum electrodes. <i>Catalysis Today</i> , 2001, 70, 411-425.	4.4	40

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19	Strictly potentiostatic current oscillations during bulk CO electro-oxidation on platinum in the presence of inhibiting anions. <i>Electrochemistry Communications</i> , 2005, 7, 710-716.	4.7	38
20	The Impact of the Operation Mode on Pattern Formation in Electrode Reactions: From Potentiostatic to Galvanostatic Control. <i>Journal of the Electrochemical Society</i> , 1998, 145, 2404-2411.	2.9	37
21	Symmetries of Chimera States. <i>Physical Review Letters</i> , 2018, 120, 214101.	7.8	36
22	Stability of uniform electrode states in the presence of ohmic drop compensation. <i>Electrochimica Acta</i> , 2003, 49, 103-115.	5.2	35
23	A hierarchy of global coupling induced cluster patterns during the oscillatory H <sub>2</sub> -electrooxidation reaction on a Pt ring-electrode. <i>Physical Chemistry Chemical Physics</i> , 2005, 7, 2429.	2.8	33
24	Dynamic instabilities during the continuous electro-oxidation of CO on poly- and single crystalline Pt electrodes. <i>Surface Science</i> , 2009, 603, 1646-1651.	1.9	32
25	Fluctuation enhanced electrochemical reaction rates at the nanoscale. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 4528-4532.	7.1	31
26	Nonlocal Complex Ginzburg-Landau Equation for Electrochemical Systems. <i>Physical Review Letters</i> , 2008, 100, 054101.	7.8	30
27	Spatial bifurcations of fixed points and limit cycles during the electrochemical oxidation of H <sub>2</sub> on Pt ring-electrodes. <i>Faraday Discussions</i> , 2002, 120, 165-178.	3.2	29
28	Mixed-mode oscillations and cluster patterns in an electrochemical relaxation oscillator under galvanostatic control. <i>Chaos</i> , 2008, 18, 015103.	2.5	29
29	Resonance tongues in a system of globally coupled FitzHugh-Nagumo oscillators with time-periodic coupling strength. <i>Chaos</i> , 2010, 20, 043114.	2.5	27
30	Irregular Subharmonic Cluster Patterns in an Autonomous Photoelectrochemical Oscillator. <i>Physical Review Letters</i> , 2009, 102, 194101.	7.8	26
31	Stationary Small and Large Amplitude Patterns during Bulk CO Electrooxidation on Platinum. <i>ChemPhysChem</i> , 2003, 4, 1260-1263.	2.1	25
32	Stationary Spatial Patterns during Bulk CO Electrooxidation on Platinum. <i>Journal of Physical Chemistry B</i> , 2005, 109, 3408-3415.	2.6	24
33	Fronts and stationary domains during electrochemical H <sub>2</sub> oxidation on Pt: The impact of the position of the reference electrode on the spatiotemporal behaviour. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 2497-2502.	2.8	22
34	Spatially Resolved ATR-FTIRS Study of the Formation of Macroscopic Domains and Microislands during CO Electrooxidation on Pt. <i>ChemPhysChem</i> , 2010, 11, 3002-3010.	2.1	21
35	Bistability and Oscillations during Electrooxidation of H <sub>2</sub> /CO Mixtures on Pt: Modeling and Bifurcation Analysis. <i>Journal of Physical Chemistry C</i> , 2007, 111, 13481-13489.	3.1	20
36	Electrochemical impedance spectroscopy of patterned steady states on electrode surfaces. <i>Electrochimica Acta</i> , 2009, 55, 410-415.	5.2	20

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37	Ellipsomicroscopic studies of the anodic oxidation of p-type silicon in fluoride containing electrolytes during current oscillations. <i>Journal of Electroanalytical Chemistry</i> , 2012, 666, 1-10.	3.8	20
38	Subharmonic phase clusters in the complex Ginzburg-Landau equation with nonlinear global coupling. <i>Physical Review E</i> , 2010, 82, 065202.	2.1	19
39	The S-Shaped Negative Differential Resistance during the Electrooxidation of H <sub>2</sub> /CO in Polymer Electrolyte Membrane Fuel Cells: Modeling and Experimental Proof. <i>Journal of Physical Chemistry C</i> , 2011, 115, 25315-25329.	3.1	19
40	Deciphering the Origin of High-Order Periodic and Aperiodic Cyclic Voltammetric Responses During Oxidation Processes on Platinum. <i>Journal of Physical Chemistry B</i> , 2002, 106, 12258-12266.	2.6	18
41	A Capacitance Mediated Positive Differential Resistance Oscillator Model for Electrochemical Systems Involving a Surface Layer. <i>Journal of Physical Chemistry C</i> , 2014, 118, 24407-24414.	3.1	17
42	Dissipative solitons and backfiring in the electrooxidation of CO on Pt. <i>Scientific Reports</i> , 2015, 5, 16312.	3.3	17
43	Cluster singularity: The unfolding of clustering behavior in globally coupled Stuart-Landau oscillators. <i>Chaos</i> , 2019, 29, 023107.	2.5	17
44	The Role of Electrocatalysis in a Sustainable Future: From Renewable Energy Conversion and Storage to Emerging Reactions. <i>ChemPhysChem</i> , 2019, 20, 2900-2903.	2.1	17
45	Normal-form approach to spatiotemporal pattern formation in globally coupled electrochemical systems. <i>Physical Review E</i> , 2008, 78, 057201.	2.1	16
46	High-Amplitude versus Low-Amplitude Current Oscillations during the Anodic Oxidation of p-Type Silicon in Fluoride Containing Electrolytes. <i>ChemPhysChem</i> , 2012, 13, 2989-2996.	2.1	16
47	Complex Spatiotemporal Antiphase Oscillations during Electrodissolution of a Metal Disk Electrode: Model Calculations. <i>Journal of Physical Chemistry B</i> , 2003, 107, 5825-5835.	2.6	15
48	Oscillatory behaviour in Galvanostatic Formaldehyde Oxidation on Nanostructured Pt/Glassy Carbon Model Electrodes. <i>ChemPhysChem</i> , 2010, 11, 1405-1415.	2.1	15
49	Cooperative Behaviour of Pt Microelectrodes during CO Bulk Electrooxidation. <i>ChemPhysChem</i> , 2013, 14, 1117-1121.	2.1	15
50	Nonlinear Dynamics in Electrochemical Systems. , 0, , 89-208.		14
51	Two-cluster solutions in an ensemble of generic limit-cycle oscillators with periodic self-forcing via the mean-field. <i>Physical Review E</i> , 2014, 90, 042911.	2.1	14
52	An Emergent Space for Distributed Data With Hidden Internal Order Through Manifold Learning. <i>IEEE Access</i> , 2018, 6, 77402-77413.	4.2	14
53	The True Fate of Pyridinium in the Reportedly Pyridinium-Catalyzed Carbon Dioxide Electroreduction on Platinum. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 14769-14772.	13.8	14
54	Sequential Activation and Oscillations of Globally Coupled Microelectrodes during a Bistable Reaction. <i>ChemElectroChem</i> , 2014, 1, 1046-1056.	3.4	13

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55	Coupled Dynamics of Anode and Cathode in Proton-Exchange Membrane Fuel Cells. <i>ChemPhysChem</i> , 2019, 20, 3081-3088.	2.1	12
56	Autonomous Oscillations and Pattern Formation with Zero External Resistance during Silicon Electrodeposition. <i>Electrochimica Acta</i> , 2017, 246, 315-321.	5.2	11
57	Distributed coupling complexity in a weakly coupled oscillatory network with associative properties. <i>New Journal of Physics</i> , 2013, 15, 083010.	2.9	10
58	Nanoimprint methods for the fabrication of macroscopic plasmonically active metal nanostructures. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	10
59	Lyapunov spectra and collective modes of chimera states in globally coupled Stuart-Landau oscillators. <i>Physical Review E</i> , 2019, 100, 022217.	2.1	10
60	Bichoticity induced by inherent birhythmicity during the oscillatory electrodeposition of silicon. <i>Chaos</i> , 2019, 29, 043127.	2.5	10
61	Coherent structures emerging from turbulence in the nonlocal complex Ginzburg-Landau equation. <i>Physical Review E</i> , 2008, 78, 026215.	2.1	9
62	Kinetic enhancement in nanoscale electrochemical systems caused by non-normal distributions of the electrode potential. <i>Journal of Chemical Physics</i> , 2011, 134, 244512.	3.0	9
63	Stability and Long Term Behavior of a Hebbian Network of Kuramoto Oscillators. <i>SIAM Journal on Applied Dynamical Systems</i> , 2015, 14, 188-201.	1.6	9
64	Activation of silicon surfaces for H <sub>2</sub> evolution by electrografting of pyridine molecules. <i>Surface Science</i> , 2015, 631, 185-189.	1.9	8
65	Robust autoassociative memory with coupled networks of Kuramoto-type oscillators. <i>Physical Review E</i> , 2016, 94, 022309.	2.1	8
66	Attracting Poisson chimeras in two-population networks. <i>Chaos</i> , 2021, 31, 113101.	2.5	8
67	Trapping Electrochemical Oscillations between Self-Organized Potential Walls. <i>ChemPhysChem</i> , 2003, 4, 1348-1351.	2.1	7
68	Photoelectrochemical reactivity of well-defined mesoscale gold arrays on SiO <sub>2</sub> /Si substrates in CO <sub>2</sub> -saturated aqueous electrolyte. <i>Electrochimica Acta</i> , 2018, 268, 546-553.	5.2	7
69	Electro-oxidation of p-silicon in fluoride-containing electrolyte: a physical model for the regime of negative differential resistance. <i>European Physical Journal: Special Topics</i> , 2019, 227, 2641-2658.	2.6	7
70	Lateral silicon oxide/gold interfaces enhance the rate of electrochemical hydrogen evolution reaction in alkaline media. <i>Journal of Chemical Physics</i> , 2020, 152, 154705.	3.0	7
71	Spontaneous Formation of Microgroove Arrays on the Surface of p-type Porous Silicon Induced by a Turing Instability in Electrochemical Dissolution. <i>ChemPhysChem</i> , 2015, 16, 1613-1618.	2.1	6
72	A comparison of modeling frameworks for the oscillatory silicon electrodeposition. <i>Electrochimica Acta</i> , 2016, 210, 346-351.	5.2	5

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73	Self-Organized Multifrequency Clusters in an Oscillating Electrochemical System with Strong Nonlinear Coupling. <i>Physical Review Letters</i> , 2021, 126, 194101.	7.8	5
74	Between synchrony and turbulence: intricate hierarchies of coexistence patterns. <i>Nature Communications</i> , 2021, 12, 5634.	12.8	5
75	Measurement and Analysis of Dynamic Impedance Spectra Acquired During the Oscillatory Electrodeposition of p-type Silicon in Fluoride-Containing Electrolytes. <i>ChemElectroChem</i> , 2018, 5, 1548-1551.	3.4	4
76	Birhythmicity, intrinsic entrainment, and minimal chimeras in an electrochemical experiment. <i>Chaos</i> , 2021, 31, 091102.	2.5	4
77	2-Cluster Fixed-Point Analysis of Mean-Coupled Stuart-Landau Oscillators in the Center Manifold. <i>Journal of Physics Complexity</i> , 0, , .	2.2	4
78	Self-organized reactivity patterns during the oxidation of H <sub>2</sub> –CO mixtures on a rotating Pt ring-electrode. <i>Electrochimica Acta</i> , 2013, 112, 894-898.	5.2	2
79	Destructive impact of molecular noise on nanoscale electrochemical oscillators. <i>European Physical Journal: Special Topics</i> , 2017, 226, 1997-2013.	2.6	2
80	Global Heteroclinic Rebel Dynamics Among Large 2-Clusters in Permutation Equivariant Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2021, 20, 1277-1319.	1.6	2
81	Connecting minimal chimeras and fully asymmetric chaotic attractors through equivariant pitchfork bifurcations. <i>Physical Review E</i> , 2021, 103, L060201.	2.1	2
82	Collective oscillations of globally coupled bistable, nonresonant components. <i>Physical Review Research</i> , 2020, 2, .	3.6	2
83	Electrochemical Cells: Basics. , 2013, , 1-19.		1
84	The True Fate of Pyridinium in the Reportedly Pyridinium-Catalyzed Carbon Dioxide Electroreduction on Platinum. <i>Angewandte Chemie</i> , 2018, 130, 14985-14988.	2.0	1
85	Tuning the feature size of nanoimprinting stamps: A method to enhance the flexibility of nanoimprint lithography. <i>Journal of Applied Physics</i> , 2022, 131, .	2.5	1
86	TURBULENCE AND SYNCHRONY IN SPATIALLY EXTENDED ELECTROCHEMICAL OSCILLATORS. <i>World Scientific Lecture Notes in Complex Systems</i> , 2013, , 237-260.	0.1	0
87	A scalable pattern-matching architecture utilizing phase oscillators of different frequencies. , 2014, , .		0
88	Introduction to Focus Issue: In Memory of John L. Hudson: Self-Organized Structures in Chemical Systems. <i>Chaos</i> , 2018, 28, 045001.	2.5	0
89	Dynamical aspects of mean field theories for electrolytes and applications. <i>European Physical Journal: Special Topics</i> , 2019, 227, 2513-2514.	2.6	0
90	Bifurcations of clusters and collective oscillations in networks of bistable units. <i>Chaos</i> , 2021, 31, 113140.	2.5	0