Katharina Krischer

List of Publications by Year
in descending order

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	Tuning the feature size of nanoimprinting stamps: A method to enhance the flexibility of nanoimprint lithography. Journal of Applied Physics, 2022, 131, .	2.5	1
2	Global Heteroclinic Rebel Dynamics Among Large 2-Clusters in Permutation Equivariant Systems. SIAM Journal on Applied Dynamical Systems, 2021, 20, 1277-1319.	1.6	2
3	Self-Organized Multifrequency Clusters in an Oscillating Electrochemical System with Strong Nonlinear Coupling. Physical Review Letters, 2021, 126, 194101.	7.8	5
4	Connecting minimal chimeras and fully asymmetric chaotic attractors through equivariant pitchfork bifurcations. Physical Review E, 2021, 103, L060201.	2.1	2
5	Birhythmicity, intrinsic entrainment, and minimal chimeras in an electrochemical experiment. Chaos, 2021, 31, 091102.	2.5	4
6	Between synchrony and turbulence: intricate hierarchies of coexistence patterns. Nature Communications, 2021, 12, 5634.	12.8	5
7	Attracting Poisson chimeras in two-population networks. Chaos, 2021, 31, 113101.	2.5	8
8	Bifurcations of clusters and collective oscillations in networks of bistable units. Chaos, 2021, 31, 113140.	2.5	0
9	Lateral silicon oxide/gold interfaces enhance the rate of electrochemical hydrogen evolution reaction in alkaline media. Journal of Chemical Physics, 2020, 152, 154705.	3.0	7
10	Collective oscillations of globally coupled bistable, nonresonant components. Physical Review Research, 2020, 2, .	3.6	2
11	Coupled Dynamics of Anode and Cathode in Protonâ€Exchange Membrane Fuel Cells. ChemPhysChem, 2019, 20, 3081-3088.	2.1	12
12	Lyapunov spectra and collective modes of chimera states in globally coupled Stuart-Landau oscillators. Physical Review E, 2019, 100, 022217.	2.1	10
13	Dynamical aspects of mean field theories for electrolytes and applications. European Physical Journal: Special Topics, 2019, 227, 2513-2514.	2.6	0
14	Bichaoticity induced by inherent birhythmicity during the oscillatory electrodissolution of silicon. Chaos, 2019, 29, 043127.	2.5	10
15	Electro-oxidation of p-silicon in fluoride-containing electrolyte: a physical model for the regime of negative differential resistance. European Physical Journal: Special Topics, 2019, 227, 2641-2658.	2.6	7
16	Cluster singularity: The unfolding of clustering behavior in globally coupled Stuart-Landau oscillators. Chaos, 2019, 29, 023107.	2.5	17
17	The Role of Electrocatalysis in a Sustainable Future: From Renewable Energy Conversion and Storage to Emerging Reactions. ChemPhysChem, 2019, 20, 2900-2903.	2.1	17
18	Photoelectrochemical reactivity of well-defined mesoscale gold arrays on SiO2/Si substrates in CO2-saturated aqueous electrolyte. Electrochimica Acta, 2018, 268, 546-553.	5.2	7

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19	Measurement and Analysis of Dynamic Impedance Spectra Acquired During the Oscillatory Electrodissolution of pâ€Type Silicon in Fluorideâ€Containing Electrolytes. ChemElectroChem, 2018, 5, 1548-1551.	3.4	4
20	An Emergent Space for Distributed Data With Hidden Internal Order Through Manifold Learning. IEEE Access, 2018, 6, 77402-77413.	4.2	14
21	The True Fate of Pyridinium in the Reportedly Pyridiniumâ€Catalyzed Carbon Dioxide Electroreduction on Platinum. Angewandte Chemie, 2018, 130, 14985-14988.	2.0	1
22	The True Fate of Pyridinium in the Reportedly Pyridiniumâ€Catalyzed Carbon Dioxide Electroreduction on Platinum. Angewandte Chemie - International Edition, 2018, 57, 14769-14772.	13.8	14
23	Introduction to Focus Issue: In Memory of John L. Hudson: Self-Organized Structures in Chemical Systems. Chaos, 2018, 28, 045001.	2.5	0
24	Symmetries of Chimera States. Physical Review Letters, 2018, 120, 214101.	7.8	36
25	Nanoimprint methods for the fabrication of macroscopic plasmonically active metal nanostructures. Journal of Applied Physics, 2017, 121, .	2.5	10
26	Destructive impact of molecular noise on nanoscale electrochemical oscillators. European Physical Journal: Special Topics, 2017, 226, 1997-2013.	2.6	2
27	Autonomous Oscillations and Pattern Formation with Zero External Resistance during Silicon Electrodissolution. Electrochimica Acta, 2017, 246, 315-321.	5.2	11
28	A classification scheme for chimera states. Chaos, 2016, 26, 094815.	2.5	144
29	Robust autoassociative memory with coupled networks of Kuramoto-type oscillators. Physical Review E, 2016, 94, 022309.	2.1	8
30	A comparison of modeling frameworks for the oscillatory silicon electrodissolution. Electrochimica Acta, 2016, 210, 346-351.	5.2	5
31	Stability and Long Term Behavior of a Hebbian Network of Kuramoto Oscillators. SIAM Journal on Applied Dynamical Systems, 2015, 14, 188-201.	1.6	9
32	Self-organized alternating chimera states in oscillatory media. Scientific Reports, 2015, 5, 9883.	3.3	56
33	Dissipative solitons and backfiring in the electrooxidation of CO on Pt. Scientific Reports, 2015, 5, 16312.	3.3	17
34	Spontaneous Formation of Microgroove Arrays on the Surface of pâ€Type Porous Silicon Induced by a Turing Instability in Electrochemical Dissolution. ChemPhysChem, 2015, 16, 1613-1618.	2.1	6
35	Clustering as a Prerequisite for Chimera States in Globally Coupled Systems. Physical Review Letters, 2015, 114, 034101.	7.8	121
36	Chimeras in globally coupled oscillatory systems: From ensembles of oscillators to spatially continuous media. Chaos, 2015, 25, 064401.	2.5	47

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37	Activation of silicon surfaces for H2 evolution by electrografting of pyridine molecules. Surface Science, 2015, 631, 185-189.	1.9	8
38	A scalable pattern-matching architecture utilizing phase oscillators of different frequencies. , 2014, , .		0
39	Pattern formation during the oscillatory photoelectrodissolution of n-type silicon: turbulence, clusters and chimeras. New Journal of Physics, 2014, 16, 063024.	2.9	44
40	Two-cluster solutions in an ensemble of generic limit-cycle oscillators with periodic self-forcing via the mean-field. Physical Review E, 2014, 90, 042911.	2.1	14
41	A Capacitance Mediated Positive Differential Resistance Oscillator Model for Electrochemical Systems Involving a Surface Layer. Journal of Physical Chemistry C, 2014, 118, 24407-24414.	3.1	17
42	Coexistence of synchrony and incoherence in oscillatory media under nonlinear global coupling. Chaos, 2014, 24, 013102.	2.5	256
43	Sequential Activation and Oscillations of Globally Coupled Microelectrodes during a Bistable Reaction. ChemElectroChem, 2014, 1, 1046-1056.	3.4	13
44	Self-organized reactivity patterns during the oxidation of H2â€“CO mixtures on a rotating Pt ring-electrode. Electrochimica Acta, 2013, 112, 894-898.	5.2	2
45	Electrochemical Cells: Basics. , 2013, , 1-19.		1
46	TURBULENCE AND SYNCHRONY IN SPATIALLY EXTENDED ELECTROCHEMICAL OSCILLATORS. World Scientific Lecture Notes in Complex Systems, 2013, , 237-260.	0.1	0
47	Distributed coupling complexity in a weakly coupled oscillatory network with associative properties. New Journal of Physics, 2013, 15, 083010.	2.9	10
48	Cooperative Behaviour of Pt Microelectrodes during CO Bulk Electrooxidation. ChemPhysChem, 2013, 14, 1117-1121.	2.1	15
49	Ellipsomicroscopic studies of the anodic oxidation of p-type silicon in fluoride containing electrolytes during current oscillations. Journal of Electroanalytical Chemistry, 2012, 666, 1-10.	3.8	20
50	The complex Ginzburgâ€“Landau equation: an introduction. Contemporary Physics, 2012, 53, 79-95.	1.8	98
51	Highâ€Amplitude versus Lowâ€Amplitude Current Oscillations during the Anodic Oxidation of pâ€Type Silicon in Fluoride Containing Electrolytes. ChemPhysChem, 2012, 13, 2989-2996.	2.1	16
52	The S-Shaped Negative Differential Resistance during the Electrooxidation of H2/CO in Polymer Electrolyte Membrane Fuel Cells: Modeling and Experimental Proof. Journal of Physical Chemistry C, 2011, 115, 25315-25329.	3.1	19
53	Kinetic enhancement in nanoscale electrochemical systems caused by non-normal distributions of the electrode potential. Journal of Chemical Physics, 2011, 134, 244512.	3.0	9
54	Oscillatory behaviour in Galvanostatic Formaldehyde Oxidation on Nanostructured Pt/Glassy Carbon Model Electrodes. ChemPhysChem, 2010, 11, 1405-1415.	2.1	15

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55	Spatially Resolved ATRâ€FTIRS Study of the Formation of Macroscopic Domains and Microislands during CO Electrooxidation on Pt. ChemPhysChem, 2010, 11, 3002-3010.	2.1	21
56	Fluctuation enhanced electrochemical reaction rates at the nanoscale. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4528-4532.	7.1	31
57	Resonance tongues in a system of globally coupled FitzHughâ€“Nagumo oscillators with time-periodic coupling strength. Chaos, 2010, 20, 043114.	2.5	27
58	Subharmonic phase clusters in the complex Ginzburg-Landau equation with nonlinear global coupling. Physical Review E, 2010, 82, 065202.	2.1	19
59	Irregular Subharmonic Cluster Patterns in an Autonomous Photoelectrochemical Oscillator. Physical Review Letters, 2009, 102, 194101.	7.8	26
60	Electrochemical impedance spectroscopy of patterned steady states on electrode surfaces. Electrochimica Acta, 2009, 55, 410-415.	5.2	20
61	Dynamic instabilities during the continuous electro-oxidation of CO on poly- and single crystalline Pt electrodes. Surface Science, 2009, 603, 1646-1651.	1.9	32
62	Pattern Formation during CO Electrooxidation on Thin Pt Films Studied with Spatially Resolved Infrared Absorption Spectroscopy. Journal of Physical Chemistry C, 2008, 112, 9548-9551.	3.1	43
63	Nonlocal Complex Ginzburg-Landau Equation for Electrochemical Systems. Physical Review Letters, 2008, 100, 054101.	7.8	30
64	Mixed-mode oscillations and cluster patterns in an electrochemical relaxation oscillator under galvanostatic control. Chaos, 2008, 18, 015103.	2.5	29
65	Normal-form approach to spatiotemporal pattern formation in globally coupled electrochemical systems. Physical Review E, 2008, 78, 057201.	2.1	16
66	Coherent structures emerging from turbulence in the nonlocal complex Ginzburg-Landau equation. Physical Review E, 2008, 78, 026215.	2.1	9
67	Bistability and Oscillations during Electrooxidation of H₂â^'CO Mixtures on Pt:â€‰ Modeling and Bifurcation Analysis. Journal of Physical Chemistry C, 2007, 111, 13481-13489.	3.1	20
68	Strictly potentiostatic current oscillations during bulk CO electro-oxidation on platinum in the presence of inhibiting anions. Electrochemistry Communications, 2005, 7, 710-716.	4.7	38
69	Transitions to Electrochemical Turbulence. Physical Review Letters, 2005, 94, 174104.	7.8	46
70	A hierarchy of global coupling induced cluster patterns during the oscillatory H2-electrooxidation reaction on a Pt ring-electrode. Physical Chemistry Chemical Physics, 2005, 7, 2429.	2.8	33
71	Stationary Spatial Patterns during Bulk CO Electrooxidation on Platinum. Journal of Physical Chemistry B, 2005, 109, 3408-3415.	2.6	24
72	Stationary Small and Large Amplitude Patterns during Bulk CO Electrooxidation on Platinum. ChemPhysChem, 2003, 4, 1260-1263.	2.1	25

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73	Trapping Electrochemical Oscillations between Self-Organized Potential Walls. ChemPhysChem, 2003, 4, 1348-1351.	2.1	7
74	Stability of uniform electrode states in the presence of ohmic drop compensation. Electrochimica Acta, 2003, 49, 103-115.	5.2	35
75	Complex Spatiotemporal Antiphase Oscillations during Electrodissolution of a Metal Disk Electrode:Â Model Calculations. Journal of Physical Chemistry B, 2003, 107, 5825-5835.	2.6	15
76	Deciphering the Origin of High-Order Periodic and Aperiodic Cyclic Voltammetric Responses During Oxidation Processes on Platinum. Journal of Physical Chemistry B, 2002, 106, 12258-12266.	2.6	18
77	Spatial bifurcations of fixed points and limit cycles during the electrochemical oxidation of H2 on Pt ring-electrodes. Faraday Discussions, 2002, 120, 165-178.	3.2	29
78	Fronts and stationary domains during electrochemical H2 oxidation on Pt: The impact of the position of the reference electrode on the spatiotemporal behaviour. Physical Chemistry Chemical Physics, 2001, 3, 2497-2502.	2.8	22
79	Turing-Type Patterns on Electrode Surfaces. Science, 2001, 291, 2395-2398.	12.6	159
80	Nonlinear phenomena during electrochemical oxidation of hydrogen on platinum electrodes. Catalysis Today, 2001, 70, 411-425.	4.4	40
81	Fronts, Waves, and Stationary Patterns in Electrochemical Systems. Angewandte Chemie - International Edition, 2001, 40, 850-869.	13.8	86
82	Spontaneous formation of spatiotemporal patterns at the electrodeâˆ£electrolyte interface. Journal of Electroanalytical Chemistry, 2001, 501, 1-21.	3.8	84
83	Pattern Formation in Globally Coupled Electrochemical Systems with an S-Shaped Current-Potential Curve. Journal of Physical Chemistry B, 2000, 104, 7545-7553.	2.6	53
84	A Theoretical Study on Turing Patterns in Electrochemical Systems. Journal of Physical Chemistry B, 2000, 104, 6081-6090.	2.6	52
85	Stationary Potential Patterns during the Reduction of Peroxodisulfate at Ag Ring Electrodes. Journal of Physical Chemistry B, 1998, 102, 10264-10271.	2.6	45
86	The Impact of the Operation Mode on Pattern Formation in Electrode Reactions: From Potentiostatic to Galvanostatic Control. Journal of the Electrochemical Society, 1998, 145, 2404-2411.	2.9	37
87	Tuning the range of spatial coupling in electrochemical systems: From local via nonlocal to global coupling. Physical Review E, 1997, 55, 2260-2266.	2.1	82
88	Synchronization and Pattern Formation in Electrochemical Oscillators:Â Model Calculations. Journal of Physical Chemistry B, 1997, 101, 2403-2410.	2.6	48
89	Nonlinear Dynamics in Electrochemical Systems. , 0, , 89-208.		14
90	2-Cluster Fixed-Point Analysis of Mean-Coupled Stuart-Landau Oscillators in the Center Manifold. Journal of Physics Complexity, 0, , .	2.2	4