Alberto Munuzuri

List of Publications by Year
in descending order

97 papers	1,641 citations	304602 22 h-index	345118 36 g-index
97 all docs	97 docs citations	97 times ranked	844 citing authors

#	Article	IF	Citations
1	Control of Turing Structures by Periodic Illumination. Physical Review Letters, 1999, 83, 2950-2952.	2.9	92
2	Control of the Chlorine Dioxideâ˘'Iodineâ˘'Malonic Acid Oscillating Reaction by Illumination. Journal of the American Chemical Society, 1999, 121, 8065-8069.	6.6	87
3	Dynamics of Turing Patterns under Spatiotemporal Forcing. Physical Review Letters, 2003, 90, 128301.	2.9	81
4	Double Cascade Turbulence and Richardson Dispersion in a Horizontal Fluid Flow Induced by Faraday Waves. Physical Review Letters, 2011, 107, 074502.	2.9	65
5	Parametric resonance of a vortex in an active medium. Physical Review E, 1994, 50, 4258-4261.	0.8	56
6	Optimal control of the COVID-19 pandemic: controlled sanitary deconfinement in Portugal. Scientific Reports, 2021, 11, 3451.	1.6	56
7	Turing pattern formation induced by spatially correlated noise. Physical Review E, 2001, 63, 056124.	0.8	55
8	Elastic excitable medium. Physical Review E, 1994, 50, R667-R670.	0.8	51
9	Spiral breakup induced by an electric current in a Belousovâ€"Zhabotinsky medium. Chaos, 1994, 4, 519-524.	1.0	50
10	Wave Propagation in a Medium with Disordered Excitability. Physical Review Letters, 1998, 80, 5437-5440.	2.9	47
11	Turing patterns mediated by network topology in homogeneous active systems. Physical Review E, 2019, 99, 062303.	0.8	47
12	Traveling-Stripe Forcing Generates Hexagonal Patterns. Physical Review Letters, 2004, 93, 048303.	2.9	46
13	Splitting of Autowaves in an Active Medium. Physical Review Letters, 1997, 79, 1941-1944.	2.9	41
14	Mechanism of the electric-field-induced vortex drift in excitable media. Physical Review E, 1993, 48, R3232-R3235.	0.8	37
15	Experimental Evidence of Localized Oscillations in the Photosensitive Chlorine Dioxide-Iodine-Malonic Acid Reaction. Physical Review Letters, 2006, 97, 178301.	2.9	35
16	Effect of Axial Growth on Turing Pattern Formation. Physical Review Letters, 2006, 96, 048304.	2.9	31
17	Attraction and repulsion of spiral waves by localized inhomogeneities in excitable media. Physical Review E, 1998, 58, R2689-R2692.	0.8	27
18	Transverse instabilities in chemical Turing patterns of stripes. Physical Review E, 2003, 68, 056206.	0.8	27

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19	Control of chemical pattern formation by a clock-and-wavefront type mechanism. Biophysical Chemistry, 2004, 110, 231-238.	1.5	26
20	Propagation of a chemical wave front in a quasi-two-dimensional superdiffusive flow. Physical Review E, 2010, 81, 066211.	0.8	26
21	Self-Organized Traveling Chemo-Hydrodynamic Fingers Triggered by a Chemical Oscillator. Journal of Physical Chemistry Letters, 2014, 5, 413-418.	2.1	26
22	Controlled pattern formation in the CDIMA reaction with a moving boundary of illumination. Physical Chemistry Chemical Physics, 2002, 4, 1315-1319.	1.3	25
23	Turing instability controlled by spatiotemporal imposed dynamics. Physical Review E, 2005, 71, 066217.	0.8	23
24	Long-term vortex interaction in active media. Physical Review E, 1996, 54, 2999-3002.	0.8	21
25	Boundary-imposed spiral drift. Physical Review E, 1996, 53, 5480-5483.	0.8	21
26	Viscous Fingering Induced by a pH-Sensitive Clock Reaction. Langmuir, 2019, 35, 4182-4188.	1.6	20
27	CHAOTIC SYNCHRONIZATION OF A ONE-DIMENSIONAL ARRAY OF NONLINEAR ACTIVE SYSTEMS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1993, 03, 1067-1074.	0.7	18
28	@sV-shaped stable nonspiral patterns. Physical Review E, 1995, 51, R845-R847.	0.8	18
29	Interaction of chemical patterns in coupled layers. Physical Review E, 2011, 84, 046210.	0.8	18
30	Spatially Localized Chemical Patterns around an A + B â†’ Oscillator Front. Journal of Physical Chemistry A, 2016, 120, 851-860.	1.1	18
31	Travelling-stripe forcing of Turing patterns. Physica D: Nonlinear Phenomena, 2004, 199, 235-242.	1.3	17
32	Determination of hemodynamic risk for vascular disease in planar artery bifurcations. Scientific Reports, 2018, 8, 2795.	1.6	17
33	Effect of electric field on Turing patterns in a microemulsion. Soft Matter, 2012, 8, 2945.	1.2	16
34	Emergence of a super-synchronized mobbing state in a large population of coupled chemical oscillators. Scientific Reports, 2016, 6, 19186.	1.6	16
35	On the orientation of stripes in fish skin patterning. Biophysical Chemistry, 2006, 124, 161-167.	1.5	15
36	Experimental steady pattern formation in reaction-diffusion-advection systems. Physical Review E, 2006, 73, 025201.	0.8	15

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37	Breathing spiral waves in the chlorine dioxideâ€"iodineâ€"malonic acid reaction-diffusion system. Physical Review E, 2008, 78, 025101.	0.8	15
38	Measurement of Large Spiral and Target Waves in Chemical Reaction-Diffusion-Advection Systems: Turbulent Diffusion Enhances Pattern Formation. Physical Review Letters, 2013, 110, 088302.	2.9	15
39	Long-lasting dashed waves in a reactive microemulsion. Physical Chemistry Chemical Physics, 2008, 10, 1094.	1.3	14
40	Chemical-wave dynamics in a vertically oscillating fluid layer. Physical Review E, 2008, 77, 026204.	0.8	14
41	Temporal viscosity modulations driven by a pH sensitive polymer coupled to a pH-changing chemical reaction. Physical Chemistry Chemical Physics, 2017, 19, 11914-11919.	1.3	14
42	Robustness and stability of flow-and-diffusion structures. Physical Review E, 2006, 73, 016207.	0.8	13
43	Periodic Perturbation of Chemical Oscillators: Entrainment and Induced Synchronization. Chemistry - A European Journal, 2014, 20, 14213-14217.	1.7	13
44	Convective structures in a two-layer gel-liquid excitable medium. Physical Review E, 2000, 61, 3771-3776.	0.8	12
45	Characterizing topological transitions in a Turing-pattern-forming reaction-diffusion system. Physical Review E, 2012, 85, 056205.	0.8	12
46	Comparison between the role of discontinuities in cardiac conduction and in a one-dimensional hardware model. Physical Review E, 1999, 59, 5962-5969.	0.8	11
47	Thermodynamic and morphological characterization of Turing patterns in non-isothermal reactionâ€"diffusion systems. Physical Chemistry Chemical Physics, 2017, 19, 14401-14411.	1.3	11
48	Simple optical feedback loop: Excitation waves and their mirror image. Physical Review E, 1997, 55, R33-R35.	0.8	9
49	Path planning based on reaction-diffusion process. , 2012, , .		9
50	Noise-Induced and Control of Collective Behavior in a Population of Coupled Chemical Oscillators. Journal of Physical Chemistry A, 2017, 121, 1855-1860.	1.1	9
51	Social media enhances languages differentiation: a mathematical description. Royal Society Open Science, 2017, 4, 170094.	1.1	9
52	Incorporating social opinion in the evolution of an epidemic spread. Scientific Reports, 2021, 11, 1772.	1.6	9
53	Influence of oscillatory centrifugal forces on the mechanism of Turing pattern formation. Physical Review E, 2015, 91, 012917.	0.8	8
54	Haemodynamic-dependent arrest of circulating tumour cells at large blood vessel bifurcations as new model for metastasis. Scientific Reports, 2021, 11, 23231.	1.6	8

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55	Frequency-modulated autowaves in excitable media. Physical Review E, 1996, 54, R5921-R5924.	0.8	7
56	Spiral wave meandering induced by fluid convection in an excitable medium. Physical Review E, 2002, 66, 036309.	0.8	7
57	Active media under rotational forcing. Physical Review E, 2006, 74, 046203.	0.8	7
58	Nanoscale changes induce microscale effects in Turing patterns. Physical Chemistry Chemical Physics, 2011, 13, 4596.	1.3	7
59	Urbanity and the dynamics of language shift in Galicia. Nature Communications, 2019, 10, 1680.	5.8	7
60	A method for spiral wave generation in the Belousov-Zhabotinsky reaction. European Journal of Physics, 1994, 15, 221-227.	0.3	6
61	Shortest-Path-Finder Algorithm in a Two-Dimensional Array of Nonlinear Electronic Circuits. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 2493-2501.	0.7	6
62	Manipulation of diffusion coefficients via periodic vertical forcing controls the mechanism of Turing pattern formation. Physical Review E, 2010, 82, 066209.	0.8	6
63	Modulation of volume fraction results in different kinetic effects in Belousovâ€"Zhabotinsky reaction confined in AOT-reverse microemulsion. Journal of Chemical Physics, 2011, 134, 094512.	1.2	6
64	Risk evaluation at municipality level of a COVID-19 outbreak incorporating relevant geographic data: the study case of Galicia. Scientific Reports, 2021, 11, 21248.	1.6	6
65	Coexistence of Eckhaus instability in forced zigzag Turing patterns. Journal of Chemical Physics, 2008, 129, 114508.	1.2	5
66	Harmonic resonant excitation of flow-distributed oscillation waves and Turing patterns driven at a growing boundary. Physical Review E, 2009, 80, 026209.	0.8	5
67	Selection of flow-distributed oscillation and Turing patterns by boundary forcing in a linearly growing, oscillating medium. Physical Review E, 2009, 80, 026208.	0.8	5
68	Pattern formation in the Belousovâ€"Zhabotinsky-PAMAM dendrimer system. Physical Chemistry Chemical Physics, 2011, 13, 7426.	1.3	5
69	Accelerated Dynamics in Active Media: From Turing Patterns to Sparkling Waves. Langmuir, 2015, 31, 3021-3026.	1.6	5
70	EXPERIMENTAL AND QUANTITATIVE MODELING STUDIES OF TURING PATTERN FORMATION UNDER STOCHASTIC SPATIAL FLUCTUATIONS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 2739-2749.	0.7	4
71	Waving patterns: A general transition from stationary to moving forced Turing structures. Physical Review E, 2006, 74, 036202.	0.8	4
72	Linguistic evolution driven by network heterogeneity and the Turing mechanism. Physical Review Research, 2021, 3, .	1.3	4

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73	Stationary Structures in a Discrete Bistable Reactionâ€"Diffusion System. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1997, 07, 2807-2825.	0.7	3
74	Transition from traveling to standing waves as a function of frequency in a reaction-diffusion system. Journal of Chemical Physics, 2008, 128, 244907.	1.2	3
75	Navigation algorithm for autonomous devices based on biological waves. , 2010, , .		3
76	In Situ Formation of Oneâ€Dimensional Assemblies of Gold Nanoparticles in Confined Media. ChemPhysChem, 2012, 13, 1347-1353.	1.0	3
77	Turing instability under centrifugal forces. Soft Matter, 2013, 9, 4509.	1.2	3
78	Externally controlled anisotropy in pattern-forming reaction-diffusion systems. Chaos, 2015, 25, 064309.	1.0	3
79	Osmotically Induced Membrane Fission in Giant Polymer Vesicles: Multilamellarity and Effect of the Amphiphilic Block Lengths. Langmuir, 2018, 34, 10984-10992.	1.6	3
80	Interface Fingering Instability Triggered by a Density-Coupled Oscillatory Chemical Reaction via Precipitation. Langmuir, 2019, 35, 13769-13781.	1.6	3
81	Turing instability in nonlinear chemical oscillators coupled via an active medium. Chaos, Solitons and Fractals, 2020, 133, 109603.	2.5	3
82	Chemical oscillators synchronized via an active oscillating medium: Dynamics and phase approximation model. Chaos, Solitons and Fractals, 2021, 145, 110809.	2.5	3
83	A bottom-up approach to construct or deconstruct a fluid instability. Scientific Reports, 2021, 11, 24368.	1.6	3
84	CELLULAR AUTOMATON MODEL AND MEASUREMENTS OF AUTOWAVE SPLITTING. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1996, 06, 1837-1844.	0.7	2
85	EFFECTS OF A QUENCHED DISORDER ON WAVE PROPAGATION IN EXCITABLE MEDIA. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 2353-2361.	0.7	2
86	The CNN solution to the shortest-path-finder problem. , 2008, , .		2
87	Harmonic vibration on a reactive fluid at boundary layer regime modifies the Turing instability. Journal of Physics: Conference Series, 2011, 296, 012016.	0.3	2
88	Impact of Enhanced Phagocytosis of Glycated Erythrocytes on Human Endothelial Cell Functions. Cells, 2022, 11, 2200.	1.8	2
89	A CNN Approach to Brian-Like Chaos-Periodicity Transitions. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 2263-2278.	0.7	1
90	Social Opinion Influence on Epidemic Scenarios. Infosys Science Foundation Series, 2021, , 465-482.	0.3	1

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91	Highly viscous fluid displaced by a chemically controlled reactive interface. Chaos, 2021, 31, 023135.	1.0	1
92	Assessing the risk of pandemic outbreaks across municipalities with mathematical descriptors based on age and mobility restrictions. Chaos, Solitons and Fractals, 2022, 160, 112156.	2.5	1
93	Applications of autowave based algorithms for autonomous explorations. , 2010, , .		0
94	Nonperfect mixing affects synchronization on a large number of chemical oscillators immersed in a chemically active time-dependent chaotic flow. Physical Review E, 2016, 94, 013103.	0.8	0
95	Resonant Behavior in a Periodically Forced Nonisothermal Oregonator. Journal of Physical Chemistry A, 2019, 123, 8083-8088.	1.1	0
96	Intermittency regimes of poorly-mixed chemical oscillators. Chaos, Solitons and Fractals, 2022, 157, 111920.	2.5	0
97	Ventilation time recommendation system incorporating local meteorological data. Indoor and Built Environment, 0, , 1420326X2210817.	1.5	0