Michael G Shats

List of Publications by Year
in descending order

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84 papers	2,367 citations	196777 29 h-index	242451 47 g-index
86 all docs	86 docs citations	86 times ranked	1579 citing authors

#	Article	IF	Citations
1	Field theory spin and momentum in water waves. Science Advances, 2022, 8, eabm1295.	4.7	25
2	Fluctuation-Induced Interaction in Turbulent Flows. Physical Review Letters, 2022, 128, 024503.	2.9	5
3	Rolling spinners on the water surface. Science Advances, 2021, 7, .	4.7	4
4	Surface waves control bacterial attachment and formation of biofilms in thin layers. Science Advances, 2020, 6, eaaz9386.	4.7	18
5	Nonequilibrium Thermodynamics of Turbulence-Driven Rotors. Physical Review Letters, 2020, 124, 254501.	2.9	6
6	Diffusion of ellipsoids in laboratory two-dimensional turbulent flow. Physics of Fluids, 2019, 31, .	1.6	3
7	Generation of Vortex Lattices at the Liquidâ€“Gas Interface Using Rotating Surface Waves. Fluids, 2019, 4, 74.	0.8	2
8	Tunable diffusion in wave-driven two-dimensional turbulence. Journal of Fluid Mechanics, 2019, 865, 811-830.	1.4	12
9	Local anisotropy of laboratory two-dimensional turbulence affects pair dispersion. Physics of Fluids, 2019, 31, 025111.	1.6	7
10	Confinement of surface spinners in liquid metamaterials. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 25424-25429.	3.3	6
11	Passive propulsion in turbulent flows. Physical Review Fluids, 2019, 4, .	1.0	8
12	Extreme concentration fluctuations due to local reversibility of mixing in turbulent flows. Modern Physics Letters B, 2018, 32, 1840028.	1.0	1
13	Rectification of chaotic fluid motion in two-dimensional turbulence. Physical Review Fluids, 2018, 3, .	1.0	14
14	Wave-based liquid-interface metamaterials. Nature Communications, 2017, 8, 14325.	5.8	50
15	Introduction to Focus Issue: Two-Dimensional Turbulence. Physics of Fluids, 2017, 29, .	1.6	17
16	WAVE-GENERATED FLOWS ON THE WATER SURFACE. International Journal of Modern Physics Conference Series, 2016, 42, 1660179.	0.7	0
17	Braid Entropy of Two-Dimensional Turbulence. Scientific Reports, 2016, 5, 18564.	1.6	13
18	SIMULTANEOUS OBSERVATION OF ENERGY AND ENSTROPHY CASCADES IN THIN-LAYER TURBULENCE. International Journal of Modern Physics Conference Series, 2016, 42, 1660185.	0.7	1

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19	Inhibition of wave-driven two-dimensional turbulence by viscoelastic films of proteins. Physical Review E, 2015, 92, 023027.	0.8	11
20	Wave-particle interaction in the Faraday waves. European Physical Journal E, 2015, 38, 106.	0.7	13
21	TURBULENCE DRIVEN BY FARADAY SURFACE WAVES. International Journal of Modern Physics Conference Series, 2014, 34, 1460379.	0.7	2
22	Taylor Particle Dispersion during Transition to Fully Developed Two-Dimensional Turbulence. Physical Review Letters, 2014, 112, 104501.	2.9	21
23	Flightâ€“crash events in turbulence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 7558-7563.	3.3	72
24	Three-Dimensional Fluid Motion in Faraday Waves: Creation of Vorticity and Generation of Two-Dimensional Turbulence. Physical Review X, 2014, 4, .	2.8	35
25	Generation and reversal of surface flows by propagating waves. Nature Physics, 2014, 10, 658-663.	6.5	44
26	Inverse Energy Cascade and Emergence of Large Coherent Vortices in Turbulence Driven by Faraday Waves. Physical Review Letters, 2013, 110, 194501.	2.9	74
27	Lagrangian scale of particle dispersion in turbulence. Nature Communications, 2013, 4, 2013.	5.8	47
28	Propagating solitons generated by localized perturbations on the surface of deep water. Physical Review E, 2012, 85, 026313.	0.8	5
29	Parametrically Excited Water Surface Ripples as Ensembles of Oscillons. Physical Review Letters, 2012, 108, 034502.	2.9	43
30	STRUCTURE FORMATION IN SPECTRALLY CONDENSED TURBULENCE. International Journal of Modern Physics Conference Series, 2012, 19, 257-261.	0.7	1
31	TURBULENCE IN THICK LAYERS. International Journal of Modern Physics Conference Series, 2012, 19, 390-395.	0.7	0
32	Oscillon Dynamics and Rogue Wave Generation in Faraday Surface Ripples. Physical Review Letters, 2012, 109, 114502.	2.9	48
33	Robust inverse energy cascade and turbulence structure in three-dimensional layers of fluid. Physics of Fluids, 2011, 23, .	1.6	31
34	Upscale energy transfer in thick turbulent fluidÂlayers. Nature Physics, 2011, 7, 321-324.	6.5	139
35	Turbulence in fluid layers. Journal of Physics: Conference Series, 2011, 318, 012001.	0.3	2
36	Modulation instability and capillary wave turbulence. Europhysics Letters, 2010, 91, 14002.	0.7	38

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37	Capillary Rogue Waves. Physical Review Letters, 2010, 104, 104503.	2.9	330
38	Turbulence Decay Rate as a Measure of Flow Dimensionality. Physical Review Letters, 2010, 105, 264501.	2.9	40
39	Xiaet al.Reply:. Physical Review Letters, 2009, 102, .	2.9	5
40	Phase Randomization of Three-Wave Interactions in Capillary Waves. Physical Review Letters, 2009, 103, 064502.	2.9	35
41	Spectrally condensed turbulence in thin layers. Physics of Fluids, 2009, 21, .	1.6	99
42	Spectrally Condensed Fluid Turbulence and L-H Transitions in Plasma. Plasma and Fusion Research, 2009, 4, 012-012.	0.3	3
43	Observation of weak turbulence spectra of capillary waves. Springer Proceedings in Physics, 2009, , 725-728.	0.1	0
44	Turbulence-Condensate Interaction in Two Dimensions. Physical Review Letters, 2008, 101, 194504.	2.9	69
45	Suppression of Turbulence by Self-Generated and Imposed Mean Flows. Physical Review Letters, 2007, 99, 164502.	2.9	54
46	Experimental progress on zonal flow physics in toroidal plasmas. Nuclear Fusion, 2007, 47, S718-S726.	1.6	109
47	SPECTRAL TRANSFER ANALYSIS IN PLASMA TURBULENCE STUDIES. , 2007, , .		0
48	Zonal flows, GAM, and radial electric field in the H-1 heliac. European Physical Journal D, 2006, 56, 1353-1359.	0.4	1
49	MeanEÃ—Bflows and GAM-like oscillations in the H-1 heliac. Plasma Physics and Controlled Fusion, 2006, 48, S17-S29.	0.9	22
50	Strong ExB Shear Flows in the Transport-Barrier Region inH-Mode Plasma. Physical Review Letters, 2006, 97, 255003.	2.9	23
51	Experimental Studies of Plasma Turbulence. World Scientific Lecture Notes in Complex Systems, 2006, , 233-279.	0.1	0
52	Spectral condensation of turbulence in plasmas and fluids and its role in low-to-high phase transitions in toroidal plasma. Physical Review E, 2005, 71, 046409.	0.8	70
53	Fluctuations and stability of plasmas in the H-1NF heliac. Nuclear Fusion, 2004, 44, 279-286.	1.6	17
54	Formation and Structure of Transport Barriers During Confinement Transitions in Toroidal Plasma. Physical Review Letters, 2004, 93, 125003.	2.9	23

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55	Spectral energy transfer and generation of turbulent structures in toroidal plasma. Physics of Plasmas, 2004, 11, 561-571.	0.7	37
56	Spectral Energy Transfer, Generation of Zonal Flows and Their Role in Confinement Transitions. Fusion Science and Technology, 2004, 46, 279-287.	0.6	2
57	Turbulent Transport Reduction and Randomization of Coherent Fluctuations by Zonal Flows in Toroidal Plasma. Physical Review Letters, 2003, 90, 125002.	2.9	31
58	Multichannel visible spectroscopy diagnostic for particle transport studies in the H-1 heliac. Review of Scientific Instruments, 2003, 74, 2048-2051.	0.6	5
59	Inverse Energy Cascade Correlated with Turbulent-Structure Generation in Toroidal Plasma. Physical Review Letters, 2003, 91, 155001.	2.9	58
60	Measurements of poloidal rotation velocity using cross-correlation spectroscopy in the H-1 heliac. Review of Scientific Instruments, 2003, 74, 2044-2047.	0.6	1
61	Experimental Evidence of Self-Regulation of Fluctuations by Time-Varying Flows. Physical Review Letters, 2002, 88, 045001.	2.9	97
62	Observation of inward turbulent particle transport in edge plasma region of CHS heliotron/torsatron. Plasma Physics and Controlled Fusion, 2002, 44, A237-A243.	0.9	6
63	Zonal flow generation in the improved confinement mode plasma and its role in confinement bifurcations. New Journal of Physics, 2002, 4, 30-30.	1.2	30
64	Power Absorption Calculation for Electron Cyclotron Resonance Heating in H-1 Heliac. Journal of the Physical Society of Japan, 2001, 70, 617-620.	0.7	4
65	Polarizers with non-rectangular grooves for high power millimeter waves. Fusion Engineering and Design, 2001, 53, 491-497.	1.0	24
66	Dynamic behaviour of the low-to-high confinement transitions in the H-1 heliac. Plasma Physics and Controlled Fusion, 2001, 43, 559-570.	0.9	21
67	Collective microwave scattering diagnostic on the H-1 heliac. Review of Scientific Instruments, 2001, 72, 352-354.	0.6	0
68	Fluctuation studies using combined Mach/triple probe. Review of Scientific Instruments, 2001, 72, 449-452.	0.6	8
69	Application of the continuous wavelet transform to the fluctuations and electric field analysis in the H-1 heliac. Review of Scientific Instruments, 2001, 72, 503-505.	0.6	10
70	Nonambipolarity of Fluctuation-Driven Fluxes and Its Effect on the Radial Electric Field. Physical Review Letters, 2001, 87, 195003.	2.9	11
71	Inward Turbulent Transport Produced by Positively Sheared Radial Electric Field in Stellarators. Physical Review Letters, 2000, 84, 6042-6045.	2.9	44
72	Effect of the radial electric field on the fluctuation-produced transport in the H-1 heliac. Plasma Physics and Controlled Fusion, 1999, 41, 1357-1370.	0.9	30

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73	Overview of probe diagnostics on the H-1 heliac. Review of Scientific Instruments, 1999, 70, 476-479.	0.6	16
74	Thresholds and the role of the radial electric field in confinement bifurcations in the H-1 heliac. Physics of Plasmas, 1998, 5, 2390-2398.	0.7	23
75	Ion temperature and plasma flows in improved confinement mode in the H-1 heliac. Physics of Plasmas, 1997, 4, 3629-3634.	0.7	38
76	Reversal of the Fluctuation-Induced Transport during Low to High Transitions in the H-1 Heliac Plasma. Physical Review Letters, 1997, 79, 2690-2693.	2.9	35
77	Improved Particle Confinement Mode in the H-1 Heliac Plasma. Physical Review Letters, 1996, 77, 4190-4193.	2.9	43
78	The H-1 radio frequency system and an initial study of plasma formation. Fusion Engineering and Design, 1995, 26, 191-201.	1.0	4
79	Instruments, 1995, 66, 1221-1224.	0.6	1
80		0.6	5
81	Driftâ€waveâ€like density fluctuations in the Advanced Toroidal Facility (ATF) torsatron. Physics of Plasmas, 1995, 2, 398-413.	0.7	14
82	Experimental investigation of the magnetic structure in the H-1 heliac. Nuclear Fusion, 1994, 34, 1653-1661.	1.6	24
83	Fluctuation and modulation transport studies in the Advanced Toroidal Facility (ATF) torsatron*. Physics of Fluids B, 1993, 5, 2513-2518.	1.7	15
84	Effects of magnetic geometry, fluctuations, and electric fields on confinement in the Advanced Toroidal Facility. Physics of Fluids B, 1992, 4, 2104-2110.	1.7	12