

# Yasushi Todo

## List of Publications by Year in descending order

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117  
papers

2,898  
citations

172457

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51  
g-index

117  
all docs

117  
docs citations

117  
times ranked

1431  
citing authors

#	ARTICLE	IF	CITATIONS
1	Chapter 5: Physics of energetic ions. Nuclear Fusion, 2007, 47, S264-S284.	3.5	478
2	Linear and nonlinear particle-magnetohydrodynamic simulations of the toroidal Alfvén eigenmode. Physics of Plasmas, 1998, 5, 1321-1327.	1.9	136
3	Computer simulation of a magnetohydrodynamic dynamo. II. Physics of Plasmas, 1995, 2, 1421-1431.	1.9	134
4	Extension of the operational regime of the LHD towards a deuterium experiment. Nuclear Fusion, 2017, 57, 102023.	3.5	116
5	Nonlinear magnetohydrodynamic effects on Alfvén eigenmode evolution and zonal flow generation. Nuclear Fusion, 2010, 50, 084016.	3.5	87
6	Energetic particle instabilities in fusion plasmas. Nuclear Fusion, 2013, 53, 104022.	3.5	79
7	Electromagnetic instability and anomalous resistivity in a magnetic neutral sheet. Physics of Plasmas, 1996, 3, 2265-2274.	1.9	72
8	Magnetohydrodynamic Vlasov simulation of the toroidal Alfvén eigenmode. Physics of Plasmas, 1995, 2, 2711-2716.	1.9	69
9	Introduction to the interaction between energetic particles and Alfvén eigenmodes in toroidal plasmas. Reviews of Modern Plasma Physics, 2019, 3, 1.	4.1	67
10	Properties of energetic-particle continuum modes destabilized by energetic ions with beam-like velocity distributions. Physics of Plasmas, 2006, 13, 082503.	1.9	64
11	Simulation of intermittent beam ion loss in a Tokamak Fusion Test Reactor experiment. Physics of Plasmas, 2003, 10, 2888-2902.	1.9	58
12	Nonlocal energetic particle mode in a JT-60U plasma. Physics of Plasmas, 2005, 12, 012503.	1.9	57
13	Development of net-current free heliotron plasmas in the Large Helical Device. Nuclear Fusion, 2009, 49, 104015.	3.5	54
14	Energetic-ion-driven global instabilities in stellarator/helical plasmas and comparison with tokamak plasmas. Plasma Physics and Controlled Fusion, 2011, 53, 024008.	2.1	46
15	Multi-phase simulation of fast ion profile flattening due to Alfvén eigenmodes in a DIII-D experiment. Nuclear Fusion, 2014, 54, 104012.	3.5	45
16	Energetic particle physics in JT-60U and JFT-2M. Plasma Physics and Controlled Fusion, 2004, 46, S31-S45.	2.1	44
17	Energetic ion transport by abrupt large-amplitude event induced by negative-ion-based neutral beam injection in the JT-60U. Nuclear Fusion, 2005, 45, 1474-1480.	3.5	44
18	Observation of Reversed-Shear Alfvén Eigenmodes Excited by Energetic Ions in a Helical Plasma. Physical Review Letters, 2010, 105, 145003.	7.8	44

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19	Wiggled structure of Herbig-Haro objects - Helical kink instability of jets from young stellar objects. <i>Astrophysical Journal</i> , 1993, 403, 164.	4.5	44
20	Hole-Clump Pair Creation in the Evolution of Energetic-Particle-Driven Geodesic Acoustic Modes. <i>Physical Review Letters</i> , 2013, 110, 155006.	7.8	43
21	Validation of comprehensive magnetohydrodynamic hybrid simulations for Alfvén eigenmode induced energetic particle transport in DIII-D plasmas. <i>Nuclear Fusion</i> , 2015, 55, 073020.	3.5	43
22	Simulations tackle abrupt massive migrations of energetic beam ions in a tokamak plasma. <i>Nature Communications</i> , 2018, 9, 3282.	12.8	42
23	Clustered frequency analysis of shear Alfvén modes in stellarators. <i>Physics of Plasmas</i> , 2010, 17, .	1.9	41
24	Benchmark of gyrokinetic, kinetic MHD and gyrofluid codes for the linear calculation of fast particle driven TAE dynamics. <i>Nuclear Fusion</i> , 2018, 58, 126027.	3.5	40
25	Verification and validation of integrated simulation of energetic particles in fusion plasmas. <i>Nuclear Fusion</i> , 2019, 59, 066006.	3.5	40
26	Fast ion profile stiffness due to the resonance overlap of multiple Alfvén eigenmodes. <i>Nuclear Fusion</i> , 2016, 56, 112008.	3.5	38
27	Active control of Alfvén eigenmodes in magnetically confined toroidal plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 054007.	2.1	37
28	Extension of operation regimes and investigation of three-dimensional currentless plasmas in the Large Helical Device. <i>Nuclear Fusion</i> , 2013, 53, 104015.	3.5	35
29	Radial Transport Characteristics of Fast Ions Due to Energetic-Particle Modes inside the Last Closed-Flux Surface in the Compact Helical System. <i>Physical Review Letters</i> , 2008, 100, 065005.	7.8	33
30	Chirping and Sudden Excitation of Energetic-Particle-Driven Geodesic Acoustic Modes in a Large Helical Device Experiment. <i>Physical Review Letters</i> , 2018, 120, 175001.	7.8	30
31	Simulation study of high-frequency energetic particle driven geodesic acoustic mode. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	28
32	Flow damping due to stochastization of the magnetic field. <i>Nature Communications</i> , 2015, 6, 5816.	12.8	28
33	Comprehensive magnetohydrodynamic hybrid simulations of fast ion driven instabilities in a Large Helical Device experiment. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	28
34	Complexity in plasma: From self-organization to geodynamo. <i>Physics of Plasmas</i> , 1996, 3, 2135-2142.	1.9	26
35	Large-Scale Simulation of Energetic Particle Driven Magnetohydrodynamic Instabilities in ITER Plasmas. <i>Plasma and Fusion Research</i> , 2014, 9, 3403068-3403068.	0.7	25
36	Simulation Study of Ballooning Modes in the Large Helical Device. <i>Plasma and Fusion Research</i> , 2010, 5, S2062-S2062.	0.7	25

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37	Linear properties of energetic particle driven geodesic acoustic mode. Physics of Plasmas, 2013, 20, 012506.	1.9	21
38	Dynamics of low- $n$ shear Alfvén modes driven by energetic N-NB ions in JT-60U. Nuclear Fusion, 2014, 54, 104001.	3.5	19
39	Self-consistent long-time simulation of chirping and beating energetic particle modes in JT-60U plasmas. Nuclear Fusion, 2017, 57, 016036.	3.5	19
40	Simulation of Alfvén eigenmodes destabilized by energetic electrons in tokamak plasmas. Nuclear Fusion, 2020, 60, 112012.	3.5	19
41	Role of convective amplification of $n = 1$ energetic particle modes for N-NB ion dynamics in JT-60U. Nuclear Fusion, 2013, 53, 073007.	3.5	18
42	Simulation of Alfvén eigenmode bursts using a hybrid code for nonlinear magnetohydrodynamics and energetic particles. Nuclear Fusion, 2012, 52, 033003.	3.5	17
43	Multi-phase hybrid simulation of energetic particle driven magnetohydrodynamic instabilities in tokamak plasmas. New Journal of Physics, 2016, 18, 115005.	2.9	17
44	Kinetic self-organization: Creation of super ion acoustic double layer. Physics of Plasmas, 1995, 2, 3609-3613.	1.9	16
45	Computer Simulation of Frequency Sweeping of Energetic Particle Mode in a JT-60U Experiment. Journal of Plasma and Fusion Research, 2003, 79, 1107-1108.	0.4	16
46	Energetic Particle-Driven Instabilities in General Toroidal Configurations. Contributions To Plasma Physics, 2010, 50, 708-712.	1.1	16
47	Saturation of a toroidal Alfvén eigenmode due to enhanced damping of nonlinear sidebands. Nuclear Fusion, 2012, 52, 094018.	3.5	16
48	Global linear gyrokinetic simulation of energetic particle-driven instabilities in the LHD stellarator. Nuclear Fusion, 2017, 57, 086018.	3.5	16
49	Fokker-Planck simulation study of Alfvén eigenmode bursts. Nuclear Fusion, 2001, 41, 1153-1159.	3.5	15
50	Sensitivity study for N-NB-driven modes in JT-60U: boundary, diffusion, gyroaverage, compressibility. Nuclear Fusion, 2016, 56, 106009.	3.5	15
51	Simulation of energetic particle driven geodesic acoustic modes and the energy channeling in the Large Helical Device plasmas. Nuclear Fusion, 2019, 59, 096041.	3.5	15
52	Non-linear simulations of internal reconnection events in spherical tokamaks. Nuclear Fusion, 2000, 40, 721-726.	3.5	14
53	Kinetic-MHD hybrid simulation of fishbone modes excited by fast ions on the experimental advanced superconducting tokamak (EAST). Physics of Plasmas, 2017, 24, .	1.9	14
54	The three-dimensional equilibrium with magnetic islands and MHD instabilities in the CFQS quasi-axisymmetric stellarator. Nuclear Fusion, 2021, 61, 036021.	3.5	12

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55	Impulsive Nature in Magnetohydrodynamic Driven Reconnection. Journal of the Physical Society of Japan, 1996, 65, 3208-3214.	1.6	11
56	Comprehensive magnetohydrodynamic hybrid simulations of Alfvén eigenmode bursts and fast-ion losses in the Large Helical Device. Nuclear Fusion, 2019, 59, 096018.	3.5	11
57	Overview of transport and MHD stability study: focusing on the impact of magnetic field topology in the Large Helical Device. Nuclear Fusion, 2015, 55, 104018.	3.5	10
58	Study of Alfvén eigenmodes stability in plasma with multiple NBI driven energetic particle species. Physics of Plasmas, 2019, 26, 062502.	1.9	10
59	Effect of precession drift motion of trapped thermal ions on ballooning modes in helical plasmas. Nuclear Fusion, 2019, 59, 094003.	3.5	10
60	Beam modulation and bump-on-tail effects on Alfvén eigenmode stability in DIII-D. Nuclear Fusion, 2021, 61, 066028.	3.5	10
61	Simulation of fast-ion-driven Alfvén eigenmodes on the Experimental Advanced Superconducting Tokamak. Physics of Plasmas, 2016, 23, 022505.	1.9	9
62	Characteristics of MHD instabilities for high beta plasmas in inward shifted LHD configurations. Nuclear Fusion, 2017, 57, 126023.	3.5	9
63	Magnetohydrodynamic hybrid simulation model with kinetic thermal ions and energetic particles. Plasma Physics and Controlled Fusion, 2021, 63, 075018.	2.1	9
64	Formation of wave-front pattern accompanied by current-driven electrostatic ion-cyclotron instabilities. Physics of Plasmas, 1997, 4, 2886-2892.	1.9	8
65	A Self-Consistent Open Boundary Model for Particle Simulation in Plasmas. Journal of the Physical Society of Japan, 1997, 66, 3826-3830.	1.6	8
66	MHD Modes Destabilized by Energetic Ions on LHD. Fusion Science and Technology, 2010, 58, 186-193.	1.1	8
67	Ion kinetic effects on linear pressure driven magnetohydrodynamic instabilities in helical plasmas. Journal of Plasma Physics, 2020, 86, .	2.1	8
68	Nonlinear simulations of energetic particle-driven instabilities interacting with Alfvén continuum during frequency chirping. Plasma Physics and Controlled Fusion, 2021, 63, 015004.	2.1	8
69	Simulation Study of Energetic Ion Transport due to Alfvén Eigenmodes in LHD Plasma. Plasma and Fusion Research, 2008, 3, S1074-S1074.	0.7	8
70	Nonlinear Hybrid Simulations of Energetic Particle Modes in Realistic Tokamak Flux Surface Geometry. Plasma and Fusion Research, 2011, 6, 2403109-2403109.	0.7	8
71	Simulations of Alfvén eigenmodes with an extended Ohm's law. Journal of Plasma Physics, 2006, 72, 817.	2.1	7
72	Numerical Analyses of Energetic Particles in LHD. Fusion Science and Technology, 2010, 58, 277-288.	1.1	7

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73	Nonlinear simulations of Alfvén eigenmodes destabilized by energetic particles. AIP Conference Proceedings, 2012, . .	0.4	7
74	Stabilization of energetic-ion driven toroidal Alfvén eigenmode by energetic electrons in tokamak plasmas. Nuclear Fusion, 2020, 60, 106004.	3.5	7
75	Nonlinear Simulation of Energetic Particle Modes in High-Beta Tokamak Plasma. Plasma and Fusion Research, 2013, 7, 2403081-2403081.	0.7	7
76	Interaction between Energetic Particles and Alfvén Eigenmodes in Reversed Shear Plasmas. Journal of the Physical Society of Japan, 2011, 80, 094501.	1.6	5
77	Simulation Study of Alfvén-Eigenmode-Induced Energetic Ion Transport in LHD. Plasma and Fusion Research, 2013, 8, 2403090-2403090.	0.7	5
78	APTWG: The 4th Asia-Pacific Transport Working Group Meeting. Nuclear Fusion, 2015, 55, 017001.	3.5	5
79	Three-dimensional MHD analysis of heliotron plasma with RMP. Nuclear Fusion, 2015, 55, 073023.	3.5	5
80	Benchmark of multi-phase method for the computation of fast ion distributions in a tokamak plasma in the presence of low-amplitude resonant MHD activity. Computer Physics Communications, 2017, 220, 279-284.	7.5	5
81	Magnetohydrodynamic hybrid simulation of Alfvén eigenmodes in Heliotron J, a low shear helical axis stellarator/heliotron. Nuclear Fusion, 2020, 60, 096005.	3.5	5
82	Overview of coordinated spherical tokamak research in Japan. Nuclear Fusion, 2022, 62, 042011.	3.5	5
83	Visualization of Fast Ion Phase-Space Flow Driven by Alfvén Instabilities. Physical Review Letters, 2021, 127, 235002.	7.8	5
84	Self-organization process of a magnetohydrodynamic plasma in the presence of thermal conduction. Physics of Plasmas, 1996, 3, 2821-2823.	1.9	4
85	Overview of Studies on Energetic-Ion-Driven MHD Instabilities in Stellarator/Helical Plasmas and Comparison with Tokamaks. Contributions To Plasma Physics, 2010, 50, 493-500.	1.1	4
86	Critical energetic particle distribution in phase space for the Alfvén eigenmode burst with global resonance overlap. Nuclear Fusion, 2019, 59, 096048.	3.5	4
87	Numerical investigation into the peripheral energetic-particle-driven MHD modes in Heliotron J with free boundary hybrid simulation. Nuclear Fusion, 2021, 61, 116065.	3.5	4
88	The systematic investigation of energetic-particle-driven geodesic acoustic mode channeling using MEGA code. Nuclear Fusion, 2020, 60, 112007.	3.5	4
89	Simulations of toroidal Alfvén eigenmode excited by fast ions on the Experimental Advanced Superconducting Tokamak. Physics of Plasmas, 2018, 25, 052503.	1.9	3
90	Precession drift reversal and rapid transport of trapped energetic particles due to an energetic particle driven instability in the Large Helical Device. Physics of Plasmas, 2021, 28, 080701.	1.9	3

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91	Hybrid simulation of NBI fast-ion losses due to the Alfvén eigenmode bursts in the Large Helical Device and the comparison with the fast-ion loss detector measurements. <i>Journal of Plasma Physics</i> , 2020, 86, .	2.1	3
92	Fusion Research and International Collaboration in the Asian Region. <i>Plasma and Fusion Research</i> , 2018, 13, 3502046-3502046.	0.7	3
93	Prediction of the energetic particle redistribution by an improved critical gradient model and analysis of the transport threshold. <i>Physics of Plasmas</i> , 2022, 29, 032304.	1.9	3
94	Open boundary particle simulation of electrostatic ion cyclotron instability. <i>Journal of Plasma Physics</i> , 1999, 61, 407-414.	2.1	2
95	Structural Transitions in an Open Non-Equilibrium System. <i>Progress of Theoretical Physics Supplement</i> , 2000, 138, 657-664.	0.1	2
96	Analysis Method for the Low-Order Resistive Interchange Instability in LHD with Stochastic Magnetic Field Line Structure. <i>Plasma and Fusion Research</i> , 2013, 8, 2403157-2403157.	0.7	2
97	Three-Dimensional Numerical Analysis of Pressure Driven Mode in RMP-Imposed LHD Plasma. <i>Plasma and Fusion Research</i> , 2014, 9, 3403134-3403134.	0.7	2
98	Three-Dimensional Numerical Analysis of Shear Flow Effects on MHD Stability in LHD Plasmas. <i>Plasma and Fusion Research</i> , 2016, 11, 2403035-2403035.	0.7	2
99	Effects of fast ions on interchange modes in the Large Helical Device plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2018, 60, 075007.	2.1	2
100	A simulation environment to simulate lower-hybrid-wave-driven plasmas efficiently. <i>Computer Physics Communications</i> , 2018, 230, 38-49.	7.5	2
101	Implementation of synthetic fast-ion loss detector and imaging heavy ion beam probe diagnostics in the 3D hybrid kinetic-MHD code MEGA. <i>Review of Scientific Instruments</i> , 2021, 92, 043558.	1.3	2
102	Non-resonant global mode in LHD partial collapse with net toroidal current. <i>Nuclear Fusion</i> , 2021, 61, 126056.	3.5	2
103	Modelling the Alfvén eigenmode induced fast-ion flow measured by an imaging neutral particle analyzer. <i>Nuclear Fusion</i> , 0, , .	3.5	2
104	Implementation of an Electrostatic Implicit Particle Simulation Scheme. <i>Journal of Computational Physics</i> , 1996, 127, 473-481.	3.8	1
105	Inductance of rf-Wave-Heated Plasmas. <i>Physical Review Letters</i> , 2003, 90, 105003.	7.8	1
106	Local observations of fast ion responses to energetic particle modes using a directional probe in the Compact Helical System (CHS). <i>Nuclear Fusion</i> , 2008, 48, 084005.	3.5	1
107	Simulation science for fusion plasmas. <i>Journal of Physics: Conference Series</i> , 2008, 133, 012025.	0.4	1
108	Kinetic thermal ion effects on maintaining high beta plasmas above the Mercier criterion in the Large Helical Device. <i>Nuclear Fusion</i> , 0, , .	3.5	1

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109	Instability in the Frequency Range of Alfvén Eigenmodes Driven by Negative-Ion-Based Neutral Beams in JT-60U. <i>Journal of Plasma and Fusion Research</i> , 2005, 81, 547-552.	0.4	1
110	Simulation study of energetic-particle driven off-axis fishbone instabilities in tokamak plasmas. <i>Nuclear Fusion</i> , 2022, 62, 026013.	3.5	1
111	Simulation of convective transport during frequency chirping of a TAE using the MEGA code. <i>Nuclear Fusion</i> , 2022, 62, 036025.	3.5	1
112	A Particle Algorithm for Linear Kinetic Analysis in Tokamak Plasmas. <i>Journal of Computational Physics</i> , 1998, 141, 37-45.	3.8	0
113	Summary of the 16th IAEA technical meeting on energetic particles in magnetic confinement systems—“theory of plasma instabilities. <i>Nuclear Fusion</i> , 2020, 60, 117001.	3.5	0
114	Alfvén Eigenmodes in Toroidal Magnetic Confinement. Nonlinear Simulation Study of Alfvén Eigenmodes. <i>Journal of Plasma and Fusion Research</i> , 1999, 75, 567-571.	0.4	0
115	Editorial: 16th IAEA Technical Meeting on Energetic Particles in Magnetic Confinement Systems—“Theory of Plasma Instabilities. <i>Nuclear Fusion</i> , 2020, 60, 110401.	3.5	0
116	Challenges of ab initio simulations to physics of burning plasma confinement. <i>Atomos</i> , 2022, 64, 152-156.	0.0	0
117	ATEQ: Adaptive toroidal equilibrium code. <i>Physics of Plasmas</i> , 2022, 29, 072503.	1.9	0