

Kanya Kusano

List of Publications by Year in descending order

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128
papers

4,086
citations

126907

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128289

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128
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128
docs citations

128
times ranked

2782
citing authors

#	ARTICLE	IF	CITATIONS
1	A multi-state HLL approximate Riemann solver for ideal magnetohydrodynamics. <i>Journal of Computational Physics</i> , 2005, 208, 315-344.	3.8	522
2	Nonlinear Force-free Field Modeling of a Solar Active Region around the Time of a Major Flare and Coronal Mass Ejection. <i>Astrophysical Journal</i> , 2008, 675, 1637-1644.	4.5	254
3	Measurement of Magnetic Helicity Injection and Free Energy Loading into the Solar Corona. <i>Astrophysical Journal</i> , 2002, 577, 501-512.	4.5	202
4	MAGNETIC FIELD STRUCTURES TRIGGERING SOLAR FLARES AND CORONAL MASS EJECTIONS. <i>Astrophysical Journal</i> , 2012, 760, 31.	4.5	162
5	The super-droplet method for the numerical simulation of clouds and precipitation: a particle-based and probabilistic microphysics model coupled with a non-hydrostatic model. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009, 135, 1307-1320.	2.7	155
6	The Trigger Mechanism of Solar Flares in a Coronal Arcade with Reversed Magnetic Shear. <i>Astrophysical Journal</i> , 2004, 610, 537-549.	4.5	151
7	Tests and Comparisons of Velocity Inversion Techniques. <i>Astrophysical Journal</i> , 2007, 670, 1434-1452.	4.5	103
8	No Major Solar Flares but the Largest Geomagnetic Storm in the Present Solar Cycle. <i>Space Weather</i> , 2015, 13, 365-367.	3.7	88
9	A Comparison of Flare Forecasting Methods. II. Benchmarks, Metrics, and Performance Results for Operational Solar Flare Forecasting Systems. <i>Astrophysical Journal, Supplement Series</i> , 2019, 243, 36.	7.7	75
10	High-resolution observations of flare precursors in the low solar atmosphere. <i>Nature Astronomy</i> , 2017, 1, .	10.1	74
11	TWIST AND CONNECTIVITY OF MAGNETIC FIELD LINES IN THE SOLAR ACTIVE REGION NOAA 10930. <i>Astrophysical Journal</i> , 2011, 738, 161.	4.5	71
12	A solar flare triggering mechanism based on the Woltjer-Taylor minimum energy principle. <i>Astrophysical Journal</i> , 1995, 441, 942.	4.5	71
13	The Characteristics of Solar X-Class Flares and CMEs: A Paradigm for Stellar Superflares and Eruptions?. <i>Solar Physics</i> , 2016, 291, 1761-1782.	2.5	69
14	A physics-based method that can predict imminent large solar flares. <i>Science</i> , 2020, 369, 587-591.	12.6	65
15	Simulation study of the self-sustainment mechanism in the reversed field pinch configuration. <i>Nuclear Fusion</i> , 1990, 30, 2075-2096.	3.5	64
16	Three-dimensional MHD modeling of the solar wind structures associated with 13 December 2006 coronal mass ejection. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	62
17	Simulation study of the self-reversal process in the reversed-field pinch based on a non-linearly driven reconnection model. <i>Nuclear Fusion</i> , 1986, 26, 1051-1061.	3.5	57
18	MAGNETOHYDRODYNAMIC MODELING FOR A FORMATION PROCESS OF CORONAL MASS EJECTIONS: INTERACTION BETWEEN AN EJECTING FLUX ROPE AND AN AMBIENT FIELD. <i>Astrophysical Journal</i> , 2010, 718, 1305-1314.	4.5	56

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19	Non-linear coupling effects on the relaxation process in the reversed field pinch. Nuclear Fusion, 1987, 27, 821-832.	3.5	55
20	Formation and dynamics of a solar eruptive flux tube. Nature Communications, 2018, 9, 174.	12.8	55
21	Simulation Study of the Formation Mechanism of Sigmoidal Structure in the Solar Corona. Astrophysical Journal, 2005, 631, 1260-1269.	4.5	44
22	THE MAGNETIC SYSTEMS TRIGGERING THE M6.6 CLASS SOLAR FLARE IN NOAA ACTIVE REGION 11158. Astrophysical Journal, 2013, 773, 128.	4.5	44
23	Formation of a Flare-Productive Active Region: Observation and Numerical Simulation of NOAA AR 11158. Solar Physics, 2014, 289, 3351-3369.	2.5	44
24	Improvement of solar-cycle prediction: Plateau of solar axial dipole moment. Astronomy and Astrophysics, 2017, 607, L2.	5.1	44
25	Double Arc Instability in the Solar Corona. Astrophysical Journal, 2017, 843, 101.	4.5	43
26	A Comparison of Flare Forecasting Methods. III. Systematic Behaviors of Operational Solar Flare Forecasting Systems. Astrophysical Journal, 2019, 881, 101.	4.5	42
27	EVOLUTION OF CORONAL MASS EJECTION MORPHOLOGY WITH INCREASING HELIOCENTRIC DISTANCE. I. GEOMETRICAL ANALYSIS. Astrophysical Journal, 2011, 731, 109.	4.5	41
28	Multi-scale plasma simulation by the interlocking of magnetohydrodynamic model and particle-in-cell kinetic model. Journal of Computational Physics, 2007, 227, 1340-1352.	3.8	40
29	Bifurcation and Stability of Coronal Magnetic Arcades in a Linear Force-free Field. Astrophysical Journal, 1996, 461, 415.	4.5	40
30	Nonlinear driven reconnection in the reversed-field pinch. Physical Review Letters, 1985, 54, 808-810.	7.8	38
31	NONLINEAR FORCE-FREE EXTRAPOLATION OF THE CORONAL MAGNETIC FIELD BASED ON THE MAGNETOHYDRODYNAMIC RELAXATION METHOD. Astrophysical Journal, 2014, 780, 101.	4.5	38
32	Annihilation of magnetic helicity: A new model for solar flare onset. Advances in Space Research, 2003, 32, 1931-1936.	2.6	36
33	Weak influence of near-surface layer on solar deep convection zone revealed by comprehensive simulation from base to surface. Science Advances, 2019, 5, eaau2307.	10.3	36
34	Coronal mass ejection hits mercury: A.I.K.E.F. hybrid-code results compared to MESSENGER data. Planetary and Space Science, 2018, 153, 89-99.	1.7	35
35	Role of compressibility on driven magnetic reconnection. Physics of Fluids B, 1992, 4, 450-457.	1.7	34
36	EVOLUTION OF CORONAL MASS EJECTION MORPHOLOGY WITH INCREASING HELIOCENTRIC DISTANCE. II. IN SITU OBSERVATIONS. Astrophysical Journal, 2011, 732, 117.	4.5	34

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37	STRUCTURE AND STABILITY OF MAGNETIC FIELDS IN SOLAR ACTIVE REGION 12192 BASED ON NONLINEAR FORCE-FREE FIELD MODELING. <i>Astrophysical Journal</i> , 2016, 818, 168.	4.5	33
38	A Comparison of Flare Forecasting Methods. IV. Evaluating Consecutive-day Forecasting Patterns. <i>Astrophysical Journal</i> , 2020, 890, 124.	4.5	33
39	Solar differential rotation reproduced with high-resolution simulation. <i>Nature Astronomy</i> , 2021, 5, 1100-1102.	10.1	31
40	Three-dimensional Simulation Study of Flux Rope Dynamics in the Solar Corona. <i>Astrophysical Journal</i> , 2006, 645, 742-756.	4.5	29
41	Magnetic Helicity Injection and Sigmoidal Coronal Loops. <i>Astrophysical Journal</i> , 2005, 624, 1072-1079.	4.5	27
42	Simulation study of the symmetry-breaking instability and the dipole field reversal in a rotating spherical shell dynamo. <i>Physics of Plasmas</i> , 2008, 15, .	1.9	27
43	MHD simulation of the toroidal phase locking mechanism in a reversed field pinch plasma. <i>Nuclear Fusion</i> , 1991, 31, 1923-1932.	3.5	25
44	Fast magnetic reconnection supported by sporadic small-scale Petschek-type shocks. <i>Physics of Plasmas</i> , 2015, 22, .	1.9	24
45	Magnetohydrodynamic Simulations for Studying Solar Flare Trigger Mechanism. <i>Astrophysical Journal</i> , 2017, 842, 86.	4.5	24
46	Triggering Process of the X1.0 Three-ribbon Flare in the Great Active Region NOAA 12192. <i>Astrophysical Journal</i> , 2017, 838, 134.	4.5	24
47	Relation between magnetic helicity injection and flare activities in active region NOAA 8100. <i>Advances in Space Research</i> , 2003, 32, 1949-1952.	2.6	23
48	Observational Tracking of the 2D Structure of Coronal Mass Ejections Between the Sun and 1 AU. <i>Solar Physics</i> , 2012, 279, 517-535.	2.5	23
49	Study on Precursor Activity of the X1.6 Flare in the Great AR 12192 with SDO, IRIS, and Hinode. <i>Astrophysical Journal</i> , 2017, 840, 116.	4.5	23
50	A Statistical Study of the Correlation between Magnetic Helicity Injection and Soft X-ray Activity in Solar Active Regions. <i>Astrophysical Journal</i> , 2005, 620, 1069-1084.	4.5	22
51	Three-dimensional simulation study of the magnetohydrodynamic relaxation process in the solar corona. I: Spontaneous generation of Taylor-Heyvaerts-Priest state. <i>Astrophysical Journal</i> , 1994, 433, 361.	4.5	22
52	Generation of Solar-like Differential Rotation. <i>Astrophysical Journal</i> , 2022, 933, 199.	4.5	22
53	Spontaneous formation of magnetohydrodynamic equilibrium profiles: Tokamaks, reversed-field pinches, and their intermediates. <i>Physics of Fluids</i> , 1987, 30, 2465.	1.4	20
54	Supergranular turbulence in the quiet Sun: Lagrangian coherent structures. <i>Monthly Notices of the Royal Astronomical Society</i> , 2019, 488, 3076-3088.	4.4	19

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55	Solar coronal heating by forced magnetic reconnection: Multiple reconnection events. <i>Physics of Plasmas</i> , 2005, 12, 012904.	1.9	18
56	The HLLD Approximate Riemann Solver for Magnetospheric Simulation. <i>IEEE Transactions on Plasma Science</i> , 2010, 38, 2236-2242.	1.3	18
57	Low temperature synthesis of highly oriented p-type Si _{1-x} Ge _x (x=1) on an insulator by Al-induced layer exchange. <i>Journal of Applied Physics</i> , 2017, 122, .	2.5	18
58	Measurement of magnetic helicity flux into the solar corona. <i>Advances in Space Research</i> , 2003, 32, 1917-1922.	2.6	17
59	A quantitative MHD study of the relation among arcade shearing, flux rope formation, and eruption due to the tearing instability. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	17
60	A STUDY OF THE HELIOCENTRIC DEPENDENCE OF SHOCK STANDOFF DISTANCE AND GEOMETRY USING 2.5D MAGNETOHYDRODYNAMIC SIMULATIONS OF CORONAL MASS EJECTION DRIVEN SHOCKS. <i>Astrophysical Journal</i> , 2012, 759, 103.	4.5	17
61	PREPROCESSING MAGNETIC FIELDS WITH CHROMOSPHERIC LONGITUDINAL FIELDS. <i>Astrophysical Journal</i> , 2012, 752, 126.	4.5	16
62	Coronal behavior before the large flare onset. <i>Publication of the Astronomical Society of Japan</i> , 2014, 66, .	2.5	16
63	STUDY OF MAGNETIC HELICITY INJECTION IN THE ACTIVE REGION NOAA 9236 PRODUCING MULTIPLE FLARE-ASSOCIATED CORONAL MASS EJECTION EVENTS. <i>Astrophysical Journal</i> , 2013, 778, 13.	4.5	16
64	A global MHD simulation of the Jovian magnetosphere interacting with/without the interplanetary magnetic field. <i>Journal of Geophysical Research</i> , 2001, 106, 10723-10742.	3.3	15
65	DECORRELATION TIMES OF PHOTOSPHERIC FIELDS AND FLOWS. <i>Astrophysical Journal</i> , 2012, 747, 130.	4.5	15
66	The Triggering of the 2014 March 29 Filament Eruption. <i>Astrophysical Journal</i> , 2018, 860, 163.	4.5	15
67	Data-driven MHD Simulation of Successive Solar Plasma Eruptions. <i>Astrophysical Journal</i> , 2021, 909, 155.	4.5	15
68	MHD simulation of a rapidly rotating magnetosphere interacting with the external plasma flow. <i>Geophysical Research Letters</i> , 1997, 24, 2627-2630.	4.0	14
69	Nonlinear dynamics of magnetic buoyancy instabilities in a sheared magnetic field. <i>Physics of Plasmas</i> , 1998, 5, 2582-2589.	1.9	14
70	Virtual reality visualization by CAVE with VFIVE and VTK. <i>Journal of Plasma Physics</i> , 2006, 72, 1069.	2.1	14
71	Comparison between Hinode/SOT and SDO/HMI, AIA data for the study of the solar flare trigger process. <i>Publication of the Astronomical Society of Japan</i> , 2014, 66, .	2.5	14
72	Observation of ultra low q equilibrium. <i>Nuclear Fusion</i> , 1987, 27, 1169-1173.	3.5	13

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73	Simulation study of ultra-low-q discharge process. Nuclear Fusion, 1988, 28, 89-98.	3.5	13
74	Numerical Study of Three-dimensional Magnetohydrodynamic Instability in the Solar Coronal Magnetic Arcades. Astrophysical Journal, 2002, 571, 532-539.	4.5	13
75	SIMULATION STUDY OF HEMISPHERIC PHASE-ASYMMETRY IN THE SOLAR CYCLE. Astrophysical Journal, 2017, 835, 84.	4.5	13
76	Zn-induced layer exchange of p- and n-type nanocrystalline SiGe layers for flexible thermoelectrics. Applied Physics Letters, 2020, 116, .	3.3	13
77	Global and local relaxations in magnetohydrodynamic plasmas. Physics of Fluids B, 1989, 1, 255-257.	1.7	12
78	CORONAL ELECTRON DISTRIBUTION IN SOLAR FLARES: DRIFT-KINETIC MODEL. Astrophysical Journal, 2011, 732, 111.	4.5	12
79	Is Something Wrong With the Present Solar Maximum?. Space Weather, 2013, 11, 140-141.	3.7	12
80	Lagrangian chaotic saddles and objective vortices in solar plasmas. Physical Review E, 2020, 102, 060201.	2.1	12
81	A Study of Magnetic Field Characteristics of the Flaring Active Region Based on Nonlinear Force-free Field Extrapolation. Astrophysical Journal, 2018, 863, 162.	4.5	11
82	Onset Mechanism of M6.5 Solar Flare Observed in Active Region 12371. Astrophysical Journal, 2019, 887, 263.	4.5	10
83	A New Parameter of the Photospheric Magnetic Field to Distinguish Eruptive-flare Producing Solar Active Regions. Astrophysical Journal, 2020, 894, 20.	4.5	10
84	Thickness-dependent thermoelectric properties of Si _{1-x} Ge _x films formed by Al-induced layer exchange. Journal of Applied Physics, 2021, 129, .	2.5	10
85	PSTEP: project for solar-terrestrial environment prediction. Earth, Planets and Space, 2021, 73, .	2.5	10
86	Simulation Study of Relaxation Process in the Finite \hat{I}^2 Reversed-Field Pinch. Journal of the Physical Society of Japan, 1987, 56, 963-972.	1.6	10
87	Forward Modeling of Particle Acceleration and Transport in an Individual Solar Flare. Astrophysical Journal, 2020, 902, 147.	4.5	10
88	MHD-PIC connection model in a magnetosphere-ionosphere coupling system. Journal of Plasma Physics, 2006, 72, 945.	2.1	9
89	Nonlinear regimes of forced magnetic reconnection. Physics of Plasmas, 2015, 22, .	1.9	9
90	Discussion on Momentum Transfer Difficulty of a Magnetoplasma Sail. Journal of Propulsion and Power, 2011, 27, 1149-1153.	2.2	8

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91	A PLASMA \hat{I}^2 TRANSITION WITHIN A PROPAGATING FLUX ROPE. <i>Astrophysical Journal</i> , 2013, 779, 142.	4.5	8
92	A Magnetohydrodynamic Relaxation Method for Non-force-free Magnetic Field in Magnetohydrostatic Equilibrium. <i>Astrophysical Journal, Supplement Series</i> , 2020, 247, 6.	7.7	8
93	A Comparative Study of Divergence-Cleaning Techniques for Multi-Dimensional MHD Schemes. <i>Plasma and Fusion Research</i> , 2011, 6, 2401124-2401124.	0.7	8
94	Numerical study of nonlinear forced magnetic reconnection. <i>Physics of Plasmas</i> , 2001, 8, 132-138.	1.9	7
95	The SOLAR-C mission: current status. , 2011, , .		7
96	Evaluation of Applicability of a Flare Trigger Model Based on a Comparison of Geometric Structures. <i>Astrophysical Journal</i> , 2018, 856, 43.	4.5	7
97	Magnetic Helicity Flux across Solar Active Region Photospheres. II. Association of Hemispheric Sign Preference with Flaring Activity during Solar Cycle 24. <i>Astrophysical Journal</i> , 2021, 911, 79.	4.5	6
98	Magnetic Helicity Flux across Solar Active Region Photospheres. I. Hemispheric Sign Preference in Solar Cycle 24. <i>Astrophysical Journal</i> , 2020, 904, 6.	4.5	6
99	Computer Simulations of Pulsed-Laser Induced Coherent Plasma Oscillations in GaAs Crystals. <i>Journal of the Physical Society of Japan</i> , 1996, 65, 803-810.	1.6	5
100	Serial Flaring in an Active Region: Exploring Why Only One Flare Is Eruptive. <i>Astrophysical Journal</i> , 2020, 890, 84.	4.5	5
101	Eruptivity in Solar Flares: The Challenges of Magnetic Flux Ropes. <i>Astrophysical Journal</i> , 2021, 913, 124.	4.5	5
102	Macro-micro Interlocked Simulation for Multiscale Phenomena. <i>Lecture Notes in Computer Science</i> , 2007, , 914-921.	1.3	5
103	Effect of Density Stratification on the Thermal Convection in a Rotating Spherical Shell. <i>Astrophysical Journal</i> , 2002, 581, 745-759.	4.5	5
104	Simulation study on double reconnection in the ultra-low-q configuration. <i>Nuclear Fusion</i> , 1991, 31, 179-183.	3.5	4
105	Three-dimensional Simulation Study of the Magnetohydrodynamic Relaxation Process in the Solar Corona. II.. <i>Astrophysical Journal</i> , 1997, 474, 782-789.	4.5	4
106	Modeling the Transport and Deposition of ^{10}Be Produced by the Strongest Solar Proton Event During the Holocene. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	3.3	4
107	Fabrication of Scalable Indoor Light Energy Harvester and Study for Agricultural IoT Applications. <i>Journal of Physics: Conference Series</i> , 2015, 660, 012110.	0.4	3
108	Energy conversion processes in the starting phase of externally driven reconnection. <i>Physics of Fluids B</i> , 1993, 5, 357-364.	1.7	2

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109	Onset of Hall-mediated magnetic reconnection in weakly ionized astrophysical plasmas. Monthly Notices of the Royal Astronomical Society, 2013, 434, 1789-1791.	4.4	2
110	Magnetic Helicity and Stability in Solar Corona. Geophysical Monograph Series, 0, , 149-156.	0.1	2
111	Taylor problem and onset of plasmoid instability in the Hall-magnetohydrodynamics. Physics of Plasmas, 2017, 24, 102116.	1.9	2
112	Mechanism of non-steady Petschek-type reconnection with uniform resistivity. Physics of Plasmas, 2019, 26, .	1.9	2
113	Nonlinear effects on magnetic energy release by forced magnetic reconnection: Long wavelength perturbations. Physics of Plasmas, 2006, 13, 052902.	1.9	1
114	Comment on "Supersonic regime of the Hall-magnetohydrodynamics resistive tearing instability" [Phys. Plasmas 19, 072519 (2012)]. Physics of Plasmas, 2013, 20, 014703.	1.9	1
115	Onset mechanism of solar eruptions. Journal of Atmospheric and Solar-Terrestrial Physics, 2018, 180, 3-8.	1.6	1
116	Prospect for Multiple Time and Spatial Scale Simulation Research in Astrophysical Plasma Phenomena: Multiple Scale Simulation of Magnetic Reconnection Phenomena in the Solar Corona. Journal of Plasma and Fusion Research, 2003, 79, 496-503.	0.4	1
117	The Earth Simulator Center. JAMSTEC Report of Research and Development, 2009, 9, 1_75-1_135.	0.2	1
118	Three-dimensional simulation study of magnetic reconnection in the solar corona. Earth, Planets and Space, 2001, 53, 491-494.	2.5	0
119	Study of the Relationship between Magnetic Helicity and Solar Coronal Activity. Proceedings of the International Astronomical Union, 2004, 2004, 256.	0.0	0
120	Generation and Annihilation of Magnetic Helicity in Active Regions. Highlights of Astronomy, 2005, 13, 113-116.	0.0	0
121	Simulation study of the Solar flare onset mechanism and the self-organization in the Solar coronal plasma. Journal of Plasma Physics, 2006, 72, 979.	2.1	0
122	Continuum/particle interlocked simulation of gas detonation. , 2009, , 215-220.		0
123	Effect of cloud's characteristics on climate: A one-dimensional radiative-convective equilibrium model study. , 2011, , .		0
124	Computer Simulation-Trends in Highly Nonlinear Physics. 2. Macroscopic Nonlinear Phenomena. 2-2. Nonlinear Physics in Reversed-Field Pinch.. KakuyÅ«gÅ•KenkyÅ«, 1991, 65, 528-543.	0.1	0
125	Bifurcation and Stability of the Coronal Magnetic Field. , 1996, , 303-304.		0
126	Three Dimensional Simulation Study of the Magnetohydrodynamic Relaxation Process in the Solar Corona. , 1996, , 587-588.		0

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127	Bifurcation-Transition Dynamics in Solar Coronal Plasma. <i>Astrophysics and Space Science Library</i> , 1998, , 185-186.	2.7	0
128	The Effects of Oscillations and Collisions of Emerging Bipolar Regions on the Triggering of Solar Flares. <i>Astrophysical Journal</i> , 2020, 900, 65.	4.5	0