

Dmitri Ryutov

List of Publications by Year in descending order

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Version: 2024-02-01

52
papers

2,537
citations

279798

23
h-index

189892

50
g-index

52
all docs

52
docs citations

52
times ranked

1808
citing authors

#	ARTICLE	IF	CITATIONS
1	Time-resolved turbulent dynamo in a laser plasma. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	20
2	A simple model of a strong shock driven by a spherical or cylindrical piston. Physics of Plasmas, 2021, 28, .	1.9	1
3	Electron acceleration in laboratory-produced turbulent collisionless shocks. Nature Physics, 2020, 16, 916-920.	16.7	60
4	A Hypothetical Effect of the Maxwell-Proca Electromagnetic Stresses on Galaxy Rotation Curves. Astrophysical Journal, 2019, 871, 218.	4.5	9
5	Kinetic effects on neutron generation in moderately collisional interpenetrating plasma flows. Physics of Plasmas, 2019, 26, .	1.9	12
6	Collisional and collisionless shocks. Plasma Physics and Controlled Fusion, 2019, 61, 014034.	2.1	4
7	Scaling laws for dynamical plasma phenomena. Physics of Plasmas, 2018, 25, .	1.9	24
8	Collisionless shock experiments with lasers and observation of Weibel instabilities. Physics of Plasmas, 2015, 22, .	1.9	51
9	Observation of magnetic field generation via the Weibel instability in interpenetrating plasma flows. Nature Physics, 2015, 11, 173-176.	16.7	236
10	Collisional effects in the ion Weibel instability for two counter-propagating plasma streams. Physics of Plasmas, 2014, 21, .	1.9	20
11	Structure and Dynamics of Colliding Plasma Jets. Physical Review Letters, 2013, 111, 235003.	7.8	35
12	Visualizing electromagnetic fields in laser-produced counter-streaming plasma experiments for collisionless shock laboratory astrophysics. Physics of Plasmas, 2013, 20, .	1.9	36
13	Magnetic field advection in two interpenetrating plasma streams. Physics of Plasmas, 2013, 20, .	1.9	32
14	Intra-jet shocks in two counter-streaming, weakly collisional plasma jets. Physics of Plasmas, 2012, 19, .	1.9	19
15	Simulating the magnetized liner inertial fusion plasma confinement with smaller-scale experiments. Physics of Plasmas, 2012, 19, .	1.9	26
16	Invited Article: Relation between electric and magnetic field structures and their proton-beam images. Review of Scientific Instruments, 2012, 83, 101301.	1.3	89
17	Generation of scaled protogalactic seed magnetic fields in laser-produced shock waves. Nature, 2012, 481, 480-483.	27.8	113
18	Axisymmetric Magnetic Mirror Fusion-Fission Hybrid. Fusion Science and Technology, 2012, 61, 206-215.	1.1	9

#	ARTICLE	IF	CITATIONS
19	Axisymmetric Magnetic Mirror Applications â€“ Divertor Test Stand to Fusion Power Plant. Fusion Science and Technology, 2012, 61, 70-76.	1.1	0
20	Basic scalings for collisionless-shock experiments in a plasma without pre-imposed magnetic field. Plasma Physics and Controlled Fusion, 2012, 54, 105021.	2.1	33
21	Magneto-hydrodynamically stable axisymmetric mirrors. Physics of Plasmas, 2011, 18, .	1.9	45
22	Using intense lasers to simulate aspects of accretion discs and outflows in astrophysics. Astrophysics and Space Science, 2011, 336, 21-26.	1.4	19
23	Axisymmetric Mirror as a Driver for a Fusionâ€“Fission Hybrid: Physics Issues. Journal of Fusion Energy, 2010, 29, 548-552.	1.2	15
24	Using the Rayleigh-Taylor instability for in situ measurements of thermal conductivity of warm dense matter. Astrophysics and Space Science, 2009, 322, 141-146.	1.4	1
25	Adiabatic Compression of a Dense Plasma â€œMixedâ€•with Random Magnetic Fields. Fusion Science and Technology, 2009, 56, 1489-1494.	1.1	8
26	Geometrical Effects in Plasma Stability and Dynamics of Coherent Structures in the Divertor. Contributions To Plasma Physics, 2008, 48, 48-57.	1.1	16
27	The magnetic field structure of a snowflake divertor. Physics of Plasmas, 2008, 15, .	1.9	78
28	On the Virial Theorem for Interstellar Medium. Astrophysical Journal, 2008, 674, 976-983.	4.5	4
29	Using plasma physics to weigh the photon. Plasma Physics and Controlled Fusion, 2007, 49, B429-B438.	2.1	78
30	Current and potential distribution in a divertor with toroidally-asymmetric biasing of the divertor plate. Plasma Physics and Controlled Fusion, 2007, 49, 1-13.	2.1	66
31	Solving the Stand-off Problem for Magnetized Target Fusion: Plasma Streams as Disposable Electrodes, Together with a Local Spherical Blanket. Journal of Fusion Energy, 2007, 26, 173-177.	1.2	3
32	Scaling Laws for Collisionless Laserâ€“Plasma Interactions of Relevance to Laboratory Astrophysics. Astrophysics and Space Science, 2007, 307, 291-296.	1.4	8
33	Plasma Liner with an Intermediate Heavy Shell and Thermal Pressure Drive. Fusion Science and Technology, 2006, 49, 39-55.	1.1	14
34	Similarity laws for collisionless interaction of superstrong electromagnetic fields with a plasma. Plasma Physics and Controlled Fusion, 2006, 48, L23-L31.	2.1	15
35	Dynamics of an Isolated Blob in the Presence of the X-Point. Contributions To Plasma Physics, 2006, 46, 678-684.	1.1	20
36	The dynamics of an isolated plasma filament at the edge of a toroidal device. Physics of Plasmas, 2006, 13, 122307.	1.9	29

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37	Two Models of Magnetic Support for Photoevaporated Molecular Clouds. <i>Astrophysics and Space Science</i> , 2005, 298, 183-190.	1.4	15
38	A Neutron Star Atmosphere in the Laboratory With Petawatt Lasers. <i>Astrophysics and Space Science</i> , 2005, 298, 293-298.	1.4	14
39	On the possibility of the sheath-driven, finite-beta modes localized near the divertor plate. <i>Plasma Physics and Controlled Fusion</i> , 2005, 47, 1187-1206.	2.1	7
40	Instability Driven by Sheath Boundary Conditions and Limited to Divertor Legs. <i>Contributions To Plasma Physics</i> , 2004, 44, 168-175.	1.1	42
41	Eagle Nebula: the Problem of Missing Stiffness and the Hypothesis of Magnetostatic Turbulence. <i>AIP Conference Proceedings</i> , 2004, . .	0.4	5
42	A "perfect" hydrodynamic similarity and effect of the Reynolds number on the global scale motion. <i>Physics of Plasmas</i> , 2003, 10, 2629-2632.	1.9	19
43	Scaling astrophysical phenomena to high-energy-density laboratory experiments. <i>Plasma Physics and Controlled Fusion</i> , 2002, 44, B407-B423.	2.1	64
44	Magnetohydrodynamic scaling: From astrophysics to the laboratory. <i>Physics of Plasmas</i> , 2001, 8, 1804-1816.	1.9	178
45	On the possibility of inducing strong plasma convection in the divertor of MAST. <i>Plasma Physics and Controlled Fusion</i> , 2001, 43, 1399-1423.	2.1	28
46	Discrete symmetries in axisymmetric toroidal plasma confinement. <i>Physics of Plasmas</i> , 2001, 8, 1451-1454.	1.9	10
47	Accelerating Shock Waves in a Laser-produced Density Gradient. <i>Astrophysical Journal, Supplement Series</i> , 2000, 127, 503-508.	7.7	14
48	Criteria for Scaled Laboratory Simulations of Astrophysical MHD Phenomena. <i>Astrophysical Journal, Supplement Series</i> , 2000, 127, 465-468.	7.7	184
49	Destabilizing effect of thermal conductivity on the Rayleigh-Taylor instability in a plasma. <i>Physics of Plasmas</i> , 2000, 7, 4797-4800.	1.9	14
50	The physics of fast Z-pinch. <i>Reviews of Modern Physics</i> , 2000, 72, 167-223.	45.6	556
51	Experiments on radiative collapse in laser-produced plasmas relevant to astrophysical jets. <i>Physical Review E</i> , 2000, 62, 8838-8841.	2.1	98
52	The role of finite photon mass in magnetohydrodynamics of space plasmas. <i>Plasma Physics and Controlled Fusion</i> , 1997, 39, A73-A82.	2.1	41