Roman D Smirnov

List of Publications by Year
in descending order

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93	1,555	361413	345221
papers	citations	20 h-index	36 g-index

93	93	93	891
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Influence of the inverse sheath on divertor plasma performance in tokamak edge plasma simulations. Contributions To Plasma Physics, 2020, 60, e201900097.	1.1	5
2	Fullâ€torus impurity transport simulation for optimizing plasma discharge operation using a multiâ€species impurity powder dropper in the large helical device. Contributions To Plasma Physics, 2020, 60, e201900101.	1.1	14
3	Time-dependent modeling of dust outburst into tokamak divertor plasma. Physics of Plasmas, 2020, 27, .	1.9	8
4	Simulations of divertor plasmas with inverse sheaths. Physics of Plasmas, 2020, 27, .	1.9	2
5	Experimental measurements and modeling of the deuterium release from tungsten co-deposited layers. Nuclear Materials and Energy, 2020, 23, 100743.	1.3	7
6	Time-dependent modeling of coupled plasma-wall dynamics. Physics of Plasmas, 2020, 27, 032503.	1.9	3
7	Neutral impact on anomalous edge plasma transport and its correlation with divertor plasma detachment. Nuclear Fusion, 2020, 60, 106023.	3.5	7
8	Effects of surface processes on hydrogen outgassing from metal in desorption experiments. Nuclear Fusion, 2019, 59, 096042.	3.5	9
9	Stress-induced hydrogen self-trapping in tungsten. Nuclear Fusion, 2018, 58, 126016.	3.5	23
10	Investigation of dust shielding effect of intrinsic ergodic magnetic field line structures in the peripheral plasma in the large helical device. Contributions To Plasma Physics, 2018, 58, 616-621.	1.1	1
11	Edge and divertor plasma: detachment, stability, and plasma-wall interactions. Nuclear Fusion, 2017, 57, 102010.	3.5	15
12	Simulation of impurity transport in the peripheral plasma due to the emission of dust in long pulse discharges on the Large Helical Device. Nuclear Materials and Energy, 2017, 12, 779-785.	1.3	7
13	Impact of cross-field motion on ablation of high-Z dust in fusion edge plasmas. Physics of Plasmas, 2017, 24, 072505.	1.9	1
14	Modeling of Multispecies Dynamics in Fusion-Related Materials with FACE. Fusion Science and Technology, 2017, 71, 75-83.	1.1	8
15	Impurity-induced divertor plasma oscillations. Physics of Plasmas, 2016, 23, .	1.9	22
16	He cluster dynamics in W in the presence of cluster induced formation of He traps. Physica Scripta, 2016, T167, 014021.	2.5	7
17	Revisited reaction-diffusion model of thermal desorption spectroscopy experiments on hydrogen retention in material. Journal of Applied Physics, 2015, 118, .	2.5	13
18	He cluster dynamics in fusion related plasma facing materials. Nuclear Fusion, 2015, 55, 073005.	3.5	19

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19	Analysis of the three-dimensional trajectories of dusts observed with a stereoscopic fast framing camera in the Large Helical Device. Journal of Nuclear Materials, 2015, 463, 861-864.	2.7	6
20	Modeling of hydrogen desorption from tungsten surface. Journal of Nuclear Materials, 2015, 463, 263-267.	2.7	8
21	Tungsten dust impact on ITER-like plasma edge. Physics of Plasmas, 2015, 22, .	1.9	33
22	Studies of dust transport in long pulse plasma discharges in the large helical device. Nuclear Fusion, 2015, 55, 053014.	3.5	22
23	Theoretical analysis of deuterium retention in tungsten plasma-facing components induced by various traps via thermal desorption spectroscopy. Nuclear Fusion, 2015, 55, 093017.	3.5	25
24	Atomistic modeling of growth and coalescence of helium nano-bubbles in tungsten. Journal of Nuclear Materials, 2015, 463, 359-362.	2.7	55
25	Hydrogen transport in solids with traps in the case of continuum distribution of detrapping energies. Physica Scripta, 2014, T159, 014060.	2.5	10
26	On vapor shielding of dust grains of iron, molybdenum, and tungsten in fusion plasmas. Physics of Plasmas, 2014, 21, 024501.	1.9	12
27	Longâ€Term Hydrogen Outgassing from Plasma Facing Components. Contributions To Plasma Physics, 2014, 54, 415-420.	1.1	4
28	Modeling of Hydrogen Retention and Outgassing from Co-Deposits with Distributed Energy States. Contributions To Plasma Physics, 2014, 54, 610-614.	1.1	7
29	Modeling of Tungsten Dust Transport in ITER with Multiâ€Physics Code DUSTT/UEDGE. Contributions To Plasma Physics, 2014, 54, 615-619.	1.1	1
30	Simulation Analysis of Dust-Particle Transport in the Peripheral Plasma in the Large Helical Device. Plasma and Fusion Research, 2014, 9, 3403132-3403132.	0.7	2
31	On gas desorption from the tokamak first wall during edge localized modes. Plasma Physics Reports, 2013, 39, 867-872.	0.9	1
32	Dust investigations in TEXTOR: Impact of dust on plasmaâ€“wall interactions and on plasma performance. Journal of Nuclear Materials, 2013, 438, S126-S132.	2.7	19
33	Desorption of deuterium from beryllium codeposits using flash heating. Journal of Nuclear Materials, 2013, 438, S1150-S1154.	2.7	16
34	On â€œbubblyâ€•structures in plasma facing components. Journal of Nuclear Materials, 2013, 438, S861-S864.	2.7	12
35	On the shear strength of tungsten nano-structures with embedded helium. Nuclear Fusion, 2013, 53, 082002.	3.5	37
36	Impurity Seeding with Dust Injection in Tokamak Edge Plasmas. Contributions To Plasma Physics, 2012, 52, 435-439.	1.1	7

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37	Dust in magnetic fusion devices. Plasma Physics and Controlled Fusion, 2011, 53, 083001.	2.1	158
38	On the thermal force acting on dust grain in fully ionized plasma. Physics of Plasmas, 2011, 18, 033702.	1.9	5
39	Modeling of dust transport and impact on fusion edge plasmas. , 2011, , .		0
40	Dust appearance rates during neutral beam injection and after oxygen bake in the DIII-D tokamak. Journal of Nuclear Materials, 2011, 415, S1102-S1105.	2.7	2
41	Simulation of dynamics of carbon dust particles in the JT-60U tokamak. Journal of Nuclear Materials, 2011, 415, S1106-S1110.	2.7	13
42	Modeling of dust impact on tokamak edge plasmas. Journal of Nuclear Materials, 2011, 415, S1067-S1072.	2.7	21
43	A Possible Dusty Microplasma Source of Mid-Infrared Radiation. IEEE Transactions on Plasma Science, 2010, 38, 1-9.	1.3	10
44	Multi-Fluid Modeling of Low-Recycling Divertor Regimes. Contributions To Plasma Physics, 2010, 50, 299-305.	1.1	8
45	Theoretical Aspects of Dust in Fusion Devices. Contributions To Plasma Physics, 2010, 50, 410-425.	1.1	20
46	Dust in fusion devices: The state of theory and modeling. Journal of Plasma Physics, 2010, 76, 377-388.	2.1	8
47	Dust dynamics and radiation in fusion plasmas. , 2009, , .		0
48	On temperature bifurcation of beryllium and lithium plasma facing components. Physics of Plasmas, 2009, 16, 122501.	1.9	7
49	Dust observations in the DIII-D tokamak using a fast camera. , 2009, , .		0
50	Overview of the recent DiMES and MiMES experiments in DIII-D. Physica Scripta, 2009, T138, 014007.	2.5	20
51	Release conditions of dust particle from plasma-facing wall in oblique magnetic field. Journal of Nuclear Materials, 2009, 390-391, 164-167.	2.7	3
52	On thermal radiation from fusion related metals. Fusion Engineering and Design, 2009, 84, 38-42.	1.9	15
53	Analysis of carbon deposited layer growth processes in Tore Supra. Journal of Nuclear Materials, 2009, 390-391, 49-52.	2.7	20
54	Fast camera imaging of dust in the DIII-D tokamak. Journal of Nuclear Materials, 2009, 390-391, 216-219.	2.7	24

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55	Modeling of velocity distributions of dust in tokamak edge plasmas and dustâ€“wall collisions. Journal of Nuclear Materials, 2009, 390-391, 84-87.	2.7	29
56	On visibility of carbon dust particles in fusion plasmas with fast framing cameras. Plasma Physics and Controlled Fusion, 2009, 51, 055017.	2.1	25
57	On interaction of large dust grains with fusion plasma. Physics of Plasmas, 2009, 16, 114501.	1.9	20
58	Dust studies in DIII-D and TEXTOR. Nuclear Fusion, 2009, 49, 085022.	3.5	65
59	Effect of Oblique Magnetic Field on Release Conditions of Dust Particle from Plasma-Facing Wall. Contributions To Plasma Physics, 2008, 48, 285-289.	1.1	6
60	Simulation of Dust Statistical Characteristics in Tokamaks. Contributions To Plasma Physics, 2008, 48, 290-294.	1.1	3
61	Numerical Modeling of Behavior of Dust Made of Different Materials in Plasmas. Contributions To Plasma Physics, 2008, 48, 295-299.	1.1	0
62	Dust measurements in tokamaks (invited). Review of Scientific Instruments, 2008, 79, 10F303.	1.3	67
63	Recent progress in understanding the behavior of dust in fusion devices. Plasma Physics and Controlled Fusion, 2008, 50, 124054.	2.1	66
64	Influence of emissivity on behavior of metallic dust particles in plasmas. Physics of Plasmas, 2008, 15, 073704.	1.9	11
65	Dust in fusion plasmas: theory and modeling. AIP Conference Proceedings, 2008, , .	0.4	1
66	Dust Studies in DIII-D Tokamak. AIP Conference Proceedings, 2008, , .	0.4	1
67	On thermal radiation from heated metallic dust grains. Journal Physics D: Applied Physics, 2008, 41, 015202.	2.8	19
68	Transport of Carbon Dust Particles in Tokamaks. , 2007, , .		0
69	Laser-dust interaction and dust size distribution measurements on DIII-D. Physics of Plasmas, 2007, 14, 112507.	1.9	24
70	Modelling of dynamics and transport of carbon dust particles in tokamaks. Plasma Physics and Controlled Fusion, 2007, 49, 347-371.	2.1	158
71	Modeling of dust-particle behavior for different materials in plasmas. Physics of Plasmas, 2007, 14, 052504.	1.9	34
72	Effect of truncation of electron velocity distribution on release of dust particle from plasma-facing wall. Journal of Nuclear Materials, 2007, 363-365, 264-269.	2.7	6

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73	Transport of dust particles in tokamak devices. Journal of Nuclear Materials, 2007, 363-365, 216-221.	2.7	34
74	Gravitational Effect on Release Conditions of Dust Particle from Plasma-Facing Wall. Contributions To Plasma Physics, 2006, 46, 617-622.	1.1	5
75	Two-Dimensional Simulation Study on Charging of Dust Particle on Plasma-FacingWall. Contributions To Plasma Physics, 2006, 46, 623-627.	1.1	8
76	Induced Charge of Spherical Dust Particle on Plasma-Facing Wall in Non-Uniform Electric Field. Plasma Science and Technology, 2006, 8, 122-124.	1.5	0
77	Charging of a spherical dust particle on a plasma-facing wall. Journal of Plasma Physics, 2006, 72, 1015.	2.1	3
78	Modification of the damping rate of the oscillations of a dust particle levitating in a plasma due to the delayed charging effect. Physical Review E, 2006, 74, 046402.	2.1	18
79	On dust in tokamak edge plasmas. Journal of Nuclear Materials, 2005, 337-339, 65-68.	2.7	9
80	Stationary Potential Formation and Oscillations in Plasma with Immovable Dust Particles. Plasma Science and Technology, 2005, 7, 2657-2659.	1.5	8
81	Dusty Sheaths in Magnetized Plasmas. Plasma Science and Technology, 2004, 6, 2377-2382.	1.5	1
82	Dusty Sheaths in Magnetized Plasmas. Contributions To Plasma Physics, 2004, 44, 138-143.	1.1	2
83	Particle Simulation Study of Dust Particle Dynamics in Sheaths. Contributions To Plasma Physics, 2004, 44, 150-156.	1.1	10
84	Reduction of Sheath Potential and Particle Flux at a Target Plate by Negatively Charged Dust Particles. Contributions To Plasma Physics, 2004, 44, 162-167.	1.1	2
85	On dust dynamics in tokamak edge plasmas. Physics of Plasmas, 2004, 11, 3141-3150.	1.9	111
86	Dusty sheaths in plasmas. Journal of Nuclear Materials, 2003, 313-316, 1109-1113.	2.7	5
87	Self-consistent dusty sheaths in plasmas with two-temperature electrons. Physics of Plasmas, 2003, 10, 546-552.	1.9	19
88	Relaxation of Dusty Plasmas. , 2002, , 203-206.		0
89	Dusty Sheaths in Plasmas with Two-Temperature Electrons. AIP Conference Proceedings, 2002, , .	0.4	0
90	Relaxation of dusty plasmas in plasma crystals. Journal of Plasma Physics, 2000, 63, 89-96.	2.1	1

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91	Statistical properties of relaxing dusty plasmas. European Physical Journal Special Topics, 2000, 10, Pr5-395-Pr5-398.	0.2	1
92	Statistical Description and 3D Computer Modeling of Relaxing Dusty Plasmas. , 2000, , 261-268.		1
93	Modelling of edge plasma dynamics with active wall boundary conditions. Contributions To Plasma Physics, 0, , .	1.1	0