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	Modelling of dynamics and transport of carbon dust particles in tokamaks. Plasma Physics and Controlled Fusion, 2007, 49, 347-371.	2.1	158
2	Dust in magnetic fusion devices. Plasma Physics and Controlled Fusion, 2011, 53, 083001.	2.1	158
3	On dust dynamics in tokamak edge plasmas. Physics of Plasmas, 2004, 11, 3141-3150.	1.9	111
4	Dust measurements in tokamaks (invited). Review of Scientific Instruments, 2008, 79, 10F303.	1.3	67
5	Recent progress in understanding the behavior of dust in fusion devices. Plasma Physics and Controlled Fusion, 2008, 50, 124054.	2.1	66
6	Dust studies in DIII-D and TEXTOR. Nuclear Fusion, 2009, 49, 085022.	3.5	65
7	Atomistic modeling of growth and coalescence of helium nano-bubbles in tungsten. Journal of Nuclear Materials, 2015, 463, 359-362.	2.7	55
8	On the shear strength of tungsten nano-structures with embedded helium. Nuclear Fusion, 2013, 53, 082002.	3.5	37
9	Modeling of dust-particle behavior for different materials in plasmas. Physics of Plasmas, 2007, 14, 052504.	1.9	34
10	Transport of dust particles in tokamak devices. Journal of Nuclear Materials, 2007, 363-365, 216-221.	2.7	34
11	Tungsten dust impact on ITER-like plasma edge. Physics of Plasmas, 2015, 22, .	1.9	33
12	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
13	On visibility of carbon dust particles in fusion plasmas with fast framing cameras. Plasma Physics and Controlled Fusion, 2009, 51, 055017.	2.1	25
14	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
15	Laser-dust interaction and dust size distribution measurements on DIII-D. Physics of Plasmas, 2007, 14, 112507.	1.9	24
16	Fast camera imaging of dust in the DIII-D tokamak. Journal of Nuclear Materials, 2009, 390-391, 216-219.	2.7	24
17	Stress-induced hydrogen self-trapping in tungsten. Nuclear Fusion, 2018, 58, 126016.	3.5	23
18	Studies of dust transport in long pulse plasma discharges in the large helical device. Nuclear Fusion, 2015, 55, 053014.	3.5	22

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19	Impurity-induced divertor plasma oscillations. Physics of Plasmas, 2016, 23, .	1.9	22
20	Modeling of dust impact on tokamak edge plasmas. Journal of Nuclear Materials, 2011, 415, S1067-S1072.	2.7	21
21	Overview of the recent DiMES and MiMES experiments in DIII-D. Physica Scripta, 2009, T138, 014007.	2.5	20
22	Analysis of carbon deposited layer growth processes in Tore Supra. Journal of Nuclear Materials, 2009, 390-391, 49-52.	2.7	20
23	On interaction of large dust grains with fusion plasma. Physics of Plasmas, 2009, 16, 114501.	1.9	20
24	Theoretical Aspects of Dust in Fusion Devices. Contributions To Plasma Physics, 2010, 50, 410-425.	1.1	20
25	Self-consistent dusty sheaths in plasmas with two-temperature electrons. Physics of Plasmas, 2003, 10, 546-552.	1.9	19
26	On thermal radiation from heated metallic dust grains. Journal Physics D: Applied Physics, 2008, 41, 015202.	2.8	19
27	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
28	He cluster dynamics in fusion related plasma facing materials. Nuclear Fusion, 2015, 55, 073005.	3.5	19
29	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
30	Desorption of deuterium from beryllium codeposits using flash heating. Journal of Nuclear Materials, 2013, 438, S1150-S1154.	2.7	16
31	On thermal radiation from fusion related metals. Fusion Engineering and Design, 2009, 84, 38-42.	1.9	15
32	Edge and divertor plasma: detachment, stability, and plasma-wall interactions. Nuclear Fusion, 2017, 57, 102010.	3.5	15
33	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
34	Simulation of dynamics of carbon dust particles in the JT-60U tokamak. Journal of Nuclear Materials, 2011, 415, S1106-S1110.	2.7	13
35	Revisited reaction-diffusion model of thermal desorption spectroscopy experiments on hydrogen retention in material. Journal of Applied Physics, 2015, 118, .	2.5	13
36	On â€œbubblyâ€•structures in plasma facing components. Journal of Nuclear Materials, 2013, 438, S861-S864.	2.7	12

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37	On vapor shielding of dust grains of iron, molybdenum, and tungsten in fusion plasmas. Physics of Plasmas, 2014, 21, 024501.	1.9	12
38	Influence of emissivity on behavior of metallic dust particles in plasmas. Physics of Plasmas, 2008, 15, 073704.	1.9	11
39	Particle Simulation Study of Dust Particle Dynamics in Sheaths. Contributions To Plasma Physics, 2004, 44, 150-156.	1.1	10
40	A Possible Dusty Microplasma Source of Mid-Infrared Radiation. IEEE Transactions on Plasma Science, 2010, 38, 1-9.	1.3	10
41	Hydrogen transport in solids with traps in the case of continuum distribution of detrapping energies. Physica Scripta, 2014, T159, 014060.	2.5	10
42	On dust in tokamak edge plasmas. Journal of Nuclear Materials, 2005, 337-339, 65-68.	2.7	9
43	Effects of surface processes on hydrogen outgassing from metal in desorption experiments. Nuclear Fusion, 2019, 59, 096042.	3.5	9
44	Stationary Potential Formation and Oscillations in Plasma with Immovable Dust Particles. Plasma Science and Technology, 2005, 7, 2657-2659.	1.5	8
45	Two-Dimensional Simulation Study on Charging of Dust Particle on Plasma-FacingWall. Contributions To Plasma Physics, 2006, 46, 623-627.	1.1	8
46	Multi-Fluid Modeling of Low-Recycling Divertor Regimes. Contributions To Plasma Physics, 2010, 50, 299-305.	1.1	8
47	Dust in fusion devices: The state of theory and modeling. Journal of Plasma Physics, 2010, 76, 377-388.	2.1	8
48	Modeling of hydrogen desorption from tungsten surface. Journal of Nuclear Materials, 2015, 463, 263-267.	2.7	8
49	Modeling of Multispecies Dynamics in Fusion-Related Materials with FACE. Fusion Science and Technology, 2017, 71, 75-83.	1.1	8
50	Time-dependent modeling of dust outburst into tokamak divertor plasma. Physics of Plasmas, 2020, 27, .	1.9	8
51	On temperature bifurcation of beryllium and lithium plasma facing components. Physics of Plasmas, 2009, 16, 122501.	1.9	7
52	Impurity Seeding with Dust Injection in Tokamak Edge Plasmas. Contributions To Plasma Physics, 2012, 52, 435-439.	1.1	7
53	Modeling of Hydrogen Retention and Outgassing from Co-Deposits with Distributed Energy States. Contributions To Plasma Physics, 2014, 54, 610-614.	1.1	7
54	He cluster dynamics in W in the presence of cluster induced formation of He traps. Physica Scripta, 2016, T167, 014021.	2.5	7

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55	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
56	Experimental measurements and modeling of the deuterium release from tungsten co-deposited layers. Nuclear Materials and Energy, 2020, 23, 100743.	1.3	7
57	Neutral impact on anomalous edge plasma transport and its correlation with divertor plasma detachment. Nuclear Fusion, 2020, 60, 106023.	3.5	7
58	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
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	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
61	Dusty sheaths in plasmas. Journal of Nuclear Materials, 2003, 313-316, 1109-1113.	2.7	5
62	Gravitational Effect on Release Conditions of Dust Particle from Plasma-Facing Wall. Contributions To Plasma Physics, 2006, 46, 617-622.	1.1	5
63	On the thermal force acting on dust grain in fully ionized plasma. Physics of Plasmas, 2011, 18, 033702.	1.9	5
64	Influence of the inverse sheath on divertor plasma performance in tokamak edge plasma simulations. Contributions To Plasma Physics, 2020, 60, e201900097.	1.1	5
65	Longâ€Term Hydrogen Outgassing from Plasma Facing Components. Contributions To Plasma Physics, 2014, 54, 415-420.	1.1	4
66	Charging of a spherical dust particle on a plasma-facing wall. Journal of Plasma Physics, 2006, 72, 1015.	2.1	3
67	Simulation of Dust Statistical Characteristics in Tokamaks. Contributions To Plasma Physics, 2008, 48, 290-294.	1.1	3
68	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
69	Time-dependent modeling of coupled plasma-wall dynamics. Physics of Plasmas, 2020, 27, 032503.	1.9	3
70	Dusty Sheaths in Magnetized Plasmas. Contributions To Plasma Physics, 2004, 44, 138-143.	1.1	2
71	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
72	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

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73	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
74	Simulations of divertor plasmas with inverse sheaths. Physics of Plasmas, 2020, 27, .	1.9	2
75	Relaxation of dusty plasmas in plasma crystals. Journal of Plasma Physics, 2000, 63, 89-96.	2.1	1
76	Dusty Sheaths in Magnetized Plasmas. Plasma Science and Technology, 2004, 6, 2377-2382.	1.5	1
77	Dust in fusion plasmas: theory and modeling. AIP Conference Proceedings, 2008, , .	0.4	1
78	Dust Studies in DIII-D Tokamak. AIP Conference Proceedings, 2008, , .	0.4	1
79	On gas desorption from the tokamak first wall during edge localized modes. Plasma Physics Reports, 2013, 39, 867-872.	0.9	1
80	Modeling of Tungsten Dust Transport in ITER with Multiâ€Physics Code DUSTT/UEDGE. Contributions To Plasma Physics, 2014, 54, 615-619.	1.1	1
81	Impact of cross-field motion on ablation of high-Z dust in fusion edge plasmas. Physics of Plasmas, 2017, 24, 072505.	1.9	1
82	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
83	Statistical properties of relaxing dusty plasmas. European Physical Journal Special Topics, 2000, 10, Pr5-395-Pr5-398.	0.2	1
84	Statistical Description and 3D Computer Modeling of Relaxing Dusty Plasmas. , 2000, , 261-268.		1
85	Relaxation of Dusty Plasmas. , 2002, , 203-206.		0
86	Dusty Sheaths in Plasmas with Two-Temperature Electrons. AIP Conference Proceedings, 2002, , .	0.4	0
87	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
88	Transport of Carbon Dust Particles in Tokamaks. , 2007, , .		0
89	Numerical Modeling of Behavior of Dust Made of Different Materials in Plasmas. Contributions To Plasma Physics, 2008, 48, 295-299.	1.1	0
90	Dust dynamics and radiation in fusion plasmas. , 2009, , .		0

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91	Dust observations in the DIII-D tokamak using a fast camera. , 2009, , .		0
92	Modeling of dust transport and impact on fusion edge plasmas. , 2011, , .		0
93	Modelling of edge plasma dynamics with active wall boundary conditions. Contributions To Plasma Physics, 0, , .	1.1	0