Francesco Taccogna

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/2089379/publications.pdf

Version: 2024-02-01

99	2,527	201674	214800
papers	citations	27	47
		h-index	g-index

101	101	101	1582
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A 1.5D fluidâ€"Monte Carlo model of a hydrogen helicon plasma. Plasma Physics and Controlled Fusion, 2022, 64, 055012.	2.1	2
2	The H multiaperture source NIO1: gas conditioning and first cesiations. Journal of Physics: Conference Series, 2022, 2244, 012052.	0.4	2
3	Negative hydrogen ion dynamics inside the plasma volume of a linear device: Estimates from particle-in-cell calculations. Physics of Plasmas, 2021, 28, 063503.	1.9	4
4	Vibrational excitation and dissociation of deuterium molecule by electron impact. Plasma Physics and Controlled Fusion, 2021, 63, 085006.	2.1	12
5	2D radial-azimuthal particle-in-cell benchmark for E Ã— B discharges. Plasma Sources Science and Technology, 2021, 30, 075002.	3.1	44
6	Latest experimental and theoretical advances in the production of negative ions in caesium-free plasmas. European Physical Journal D, 2021, 75, 1.	1.3	15
7	Physics of Eâ€‰Ã—â€‰B discharges relevant to plasma propulsion and similar technologies. Physics of Plasmas, 2020, 27, .	1.9	89
8	Experimental and numerical investigation on the asymmetry of the current density extracted through a plasma meniscus in negative ion accelerator. Plasma Sources Science and Technology, 2020, 29, 075012.	3.1	5
9	Perspectives, frontiers, and new horizons for plasma-based space electric propulsion. Physics of Plasmas, 2020, 27, .	1.9	140
10	Beam and installation improvements of the NIO1 ion source. Review of Scientific Instruments, 2020, 91, 013316.	1.3	7
11	Latest progress in Hall thrusters plasma modelling. Reviews of Modern Plasma Physics, 2019, 3, 1.	4.1	55
12	Parametric study of the radial plasma-wall interaction in a Hall thruster. Journal Physics D: Applied Physics, 2019, 52, 474003.	2.8	11
13	Numerical Study of Electron Cyclotron Drift Instability: Application to Hall Thruster. Frontiers in Physics, 2019, 7, .	2.1	17
14	Negative ion beam source as a complex system: identification of main processes and key interdependence. Rendiconti Lincei, 2019, 30, 277-285.	2.2	2
15	Numerical studies of the ExB electron drift instability in Hall thrusters. Plasma Sources Science and Technology, 2019, 28, 064002.	3.1	33
16	Space micropropulsion systems for Cubesats and small satellites: From proximate targets to furthermost frontiers. Applied Physics Reviews, 2018, 5, .	11.3	242
17	Guest Editorial Special Issue on Micropropulsion and Cubesats. IEEE Transactions on Plasma Science, 2018, 46, 210-213.	1.3	1
18	Kinetics of a plasma streamer ionization front. Journal Physics D: Applied Physics, 2018, 51, 064001.	2.8	5

#	Article	IF	Citations
19	How to Build PIC-MCC Models for Hall Microthrusters. IEEE Transactions on Plasma Science, 2018, 46, 219-224.	1.3	7
20	Plasma characterization of a Hall effect thruster for a negative ion source concept. AIP Conference Proceedings, 2018, , .	0.4	0
21	Alternative concept of an efficient negative ion source for neutral beams. AIP Conference Proceedings, 2018, , .	0.4	1
22	Extraction of many Hâ^' beamlets from ion source NIO1. AIP Conference Proceedings, 2018, , .	0.4	0
23	Electronegative plasma diagnostic by laser photo-detachment combined with negatively biased Langmuir probe. Physics of Plasmas, 2018, 25, 053510.	1.9	4
24	Particle modeling of radial electron dynamics in a controlled discharge of a Hall thruster. Plasma Sources Science and Technology, 2018, 27, 064006.	3.1	14
25	Three-dimensional particle-in-cell model of Hall thruster: The discharge channel. Physics of Plasmas, 2018, 25, .	1.9	26
26	On the growth mechanism of nanoparticles in plasma during pulsed laser ablation in liquids. Plasma Sources Science and Technology, 2017, 26, 045002.	3.1	31
27	PIC modeling of negative ion sources for fusion. New Journal of Physics, 2017, 19, 015012.	2.9	29
28	Improvements of the versatile multiaperture negative ion source NIO1. AIP Conference Proceedings, 2017, , .	0.4	8
29	Particle model of a cylindrical inductively coupled ion source. AIP Conference Proceedings, 2017, , .	0.4	1
30	Code-to-code benchmark tests for 3D simulation models dedicated to the extraction region in negative ion sources. AIP Conference Proceedings, 2017, , .	0.4	2
31	Experimental and numerical studies of microwave-plasma interaction in a MWPECVD reactor. AIP Advances, 2016, 6, 125001.	1.3	2
32	Particle model of full-size ITER-relevant negative ion source. Review of Scientific Instruments, 2016, 87, 02B306.	1.3	6
33	Non-equilibrium in low-temperature plasmas. European Physical Journal D, 2016, 70, 1.	1.3	42
34	First experiments with the negative ion source NIO1. Review of Scientific Instruments, 2016, 87, 02B320.	1.3	30
35	The characterization and optimization of NIO1 ion source extraction aperture using a 3D particle-in-cell code. Review of Scientific Instruments, 2016, 87, 02B145.	1.3	5
36	Photo-detachment signal analysis to accurately determine electronegativity, electron temperature, and charged species density. Applied Physics Letters, 2016, 109, .	3.3	11

#	Article	IF	Citations
37	RF Negative Ion Sources and Polarized Ion Sources. Springer Proceedings in Physics, 2016, , 145-152.	0.2	0
38	Nucleation and growth of nanoparticles in a plasma by laser ablation in liquid. Journal of Plasma Physics, 2015, 81, .	2.1	20
39	Numerical experiment to estimate the validity of negative ion diagnostic using photo-detachment combined with Langmuir probing. Physics of Plasmas, 2015, 22, .	1.9	19
40	Dust charging under surface electron emission. , 2015, , .		0
41	Monte Carlo Collision method for low temperature plasma simulation. Journal of Plasma Physics, 2015, 81, .	2.1	21
42	Three-dimensional plume simulation of multi-channel thruster configuration. Plasma Sources Science and Technology, 2014, 23, 065034.	3.1	17
43	Dust in Plasma II. Effects of Secondary Electrons: Ionization and Surface Emission. Contributions To Plasma Physics, 2014, 54, 877-888.	1.1	10
44	Numerical simulations used for a validity check on the laser induced photo-detachment diagnostic method in electronegative plasmas. Physics of Plasmas, 2014, 21, .	1.9	15
45	Negative ion extraction by particle model. Review of Scientific Instruments, 2014, 85, 02B106.	1.3	3
46	Non-classical plasma sheaths: space-charge-limited and inverse regimes under strong emission from surfaces. European Physical Journal D, 2014, 68, 1.	1.3	25
47	Negative ion extraction from hydrogen plasma bulk. Physics of Plasmas, 2013, 20, 103506.	1.9	10
48	Three-dimensional structure of the extraction region of a hybrid negative ion source. Plasma Sources Science and Technology, 2013, 22, 045019.	3.1	45
49	Plasma grid shape and size effects on the extraction of negative ions. AIP Conference Proceedings, 2013, , .	0.4	6
50	Physics of Hall-effect thruster by particle model. AIP Conference Proceedings, 2012, , .	0.4	7
51	Dust in Plasma I. Particle Size and Ionâ€Neutral Collision Effects. Contributions To Plasma Physics, 2012, 52, 744-755.	1.1	14
52	Kinetic divertor modeling. Chemical Physics, 2012, 398, 27-32.	1.9	10
53	Plasma kinetics in molecular plasmas and modeling of reentry plasmas. Plasma Physics and Controlled Fusion, 2011, 53, 124007.	2.1	25
54	Particle modelling of the hybrid negative ion source. Plasma Sources Science and Technology, 2011, 20, 024009.	3.1	25

#	Article	IF	Citations
55	Laser Ablation of Graphite in Water in a Range of Pressure from 1 to 146 atm Using Single and Double Pulse Techniques for the Production of Carbon Nanostructures. Journal of Physical Chemistry C, 2011, 115, 5123-5130.	3.1	103
56	About the Extraction of Surface Produced Ions in Negative Ion Sources. AIP Conference Proceedings, 2011, , .	0.4	1
57	Kinetic Simulations of SPT and HEMP Thrusters Including the Near-Field Plume Region. IEEE Transactions on Plasma Science, 2010, 38, 2274-2280.	1.3	27
58	Modeling of a negative ion source. III. Two-dimensional structure of the extraction region. Physics of Plasmas, 2010, 17, .	1.9	48
59	Anomalous transport induced by sheath instability in Hall effect thrusters. Applied Physics Letters, 2009, 94, .	3.3	46
60	Particleâ€inâ€Cell Simulations for Ion Thrusters. Contributions To Plasma Physics, 2009, 49, 655-661.	1.1	20
61	Plasma Structure in the Extraction Region of a Hybrid Negative Ion Source. , 2009, , .		1
62	Application of a Gridâ€Free Kinetic Model to the Collisionless Sheath. Contributions To Plasma Physics, 2008, 48, 116-120.	1.1	7
63	Selfâ€Consistent Simulations of the Plasmaâ€Wall Transition Layer. Contributions To Plasma Physics, 2008, 48, 121-125.	1.1	31
64	Plasmaâ€Neutral Interaction in Kinetic Models for the Divertor Region. Contributions To Plasma Physics, 2008, 48, 147-152.	1.1	14
65	Surfaceâ€Driven Asymmetry and Instability in the Acceleration Region of Hall Thruster. Contributions To Plasma Physics, 2008, 48, 375-386.	1.1	24
66	Ionâ€Neutral Collision Effects in Langmuir Probe Theory. Contributions To Plasma Physics, 2008, 48, 509-514.	1.1	10
67	Negative-Ion-Source Modeling: From Expansion to Extraction Region. IEEE Transactions on Plasma Science, 2008, 36, 1589-1599.	1.3	27
68	Kinetic simulations of a plasma thruster. Plasma Sources Science and Technology, 2008, 17, 024003.	3.1	57
69	Modeling of surface-dominated plasmas: From electric thruster to negative ion source. Review of Scientific Instruments, 2008, 79, 02B903.	1.3	5
70	Modeling of a negative ion source. II. Plasma-gas coupling in the extraction region. Physics of Plasmas, 2008, 15, .	1.9	33
71	Study of volume and surface effects in pure hydrogen discharges. AIP Conference Proceedings, 2007, , .	0.4	2
72	Modeling of a negative ion source. I. Gas kinetics and dynamics in the expansion region. Physics of Plasmas, 2007, 14, 073503.	1.9	32

#	Article	IF	Citations
73	Fully kinetic 2D{r,theta} model of a Hall discharge. , 2007, , .		4
74	The Particleâ€inâ€Cell Method. Contributions To Plasma Physics, 2007, 47, 563-594.	1.1	214
75	Particle in Cell Simulation of Low Temperature Laboratory Plasmas. Contributions To Plasma Physics, 2007, 47, 595-634.	1.1	96
76	Particleâ€inâ€Cell Simulation of Stationary Plasma Thruster. Contributions To Plasma Physics, 2007, 47, 635-656.	1.1	32
77	Finite size effect of dust charging in the magnetized edge plasma. Journal of Nuclear Materials, 2007, 363-365, 458-461.	2.7	12
78	Negative ion production near a divertor plate. Journal of Nuclear Materials, 2007, 363-365, 437-442.	2.7	11
79	Effect of surface roughness on secondary electron emission in a Hall discharge. , 2006, , .		2
80	Ion orbits in a cylindrical Langmuir probe. Physics of Plasmas, 2006, 13, 043501.	1.9	5
81	Start-Up Transient in a Hall Thruster. Contributions To Plasma Physics, 2006, 46, 781-786.	1.1	23
82	Multiscale Simulation of Hall Discharge. International Journal for Multiscale Computational Engineering, 2006, v4, 243-254.	1.2	2
83	Experimental investigation and modelling of double pulse laser induced plasma spectroscopy under water. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2005, 60, 975-985.	2.9	92
84	Geometrical Scaling of Hall Thruster Particle Model. AIP Conference Proceedings, 2005, , .	0.4	0
85	Self-similarity in Hall plasma discharges: Applications to particle models. Physics of Plasmas, 2005, 12, 053502.	1.9	52
86	Plasma sheaths in Hall discharge. Physics of Plasmas, 2005, 12, 093506.	1.9	52
87	High-Temperature Thermodynamic Properties of Mars-Atmosphere Components. Journal of Spacecraft and Rockets, 2005, 42, 980-989.	1.9	38
88	Plasma flow in a Hall thruster. Physics of Plasmas, 2005, 12, 043502.	1.9	28
89	Very-near-field plume simulation of a stationary plasma thruster. EPJ Applied Physics, 2004, 28, 113-122.	0.7	22
90	Plasma-surface interaction model with secondary electron emission effects. Physics of Plasmas, 2004, 11, 1220-1228.	1.9	55

#	Article	IF	Citations
91	Stationary plasma thruster simulation. Computer Physics Communications, 2004, 164, 160-170.	7.5	25
92	PIC Model of the Ion Collection by a Langmuir Probe. Contributions To Plasma Physics, 2004, 44, 594-600.	1.1	23
93	Effects of secondary electron emission from a floating surface on the plasma sheath. Vacuum, 2004, 73, 89-92.	3.5	13
94	High-Temperature Thermodynamic Properties of Mars-Atmosphere Components. , 2004, , .		2
95	A particle-in-cell/Monte Carlo model of the Ar+ion collection in He gas by a cylindrical Langmuir probe in the transition regime. EPJ Applied Physics, 2003, 22, 29-39.	0.7	19
96	Particle kinetic modelling of rarefied gases and plasmas. Plasma Sources Science and Technology, 2003, 12, S89-S97.	3.1	5
97	Particle-in-Cell with Monte Carlo Simulation of SPT-100 Exhaust Plumes. Journal of Spacecraft and Rockets, 2002, 39, 409-419.	1.9	29
98	Particle in cell/Monte Carlo model of an electric thruster. , 2000, , .		0
99	Laser photo-detachment combined with Langmuir probe in magnetized electronegative plasma: how the probe size affects the plasma dynamic?. Plasma Sources Science and Technology, 0, , .	3.1	2