

# Roland Friedl

## List of Publications by Year in descending order

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Version: 2024-02-01

34  
papers

386  
citations

759233

12  
h-index

839539

18  
g-index

34  
all docs

34  
docs citations

34  
times ranked

290  
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards powerful negative ion beams at the test facility ELISE for the ITER and DEMO NBI systems. Nuclear Fusion, 2017, 57, 116007.	3.5	39
2	Controllable evaporation of cesium from a dispenser oven. Review of Scientific Instruments, 2012, 83, 123305.	1.3	31
3	Investigations on Cs-free alternatives for negative ion formation in a low pressure hydrogen discharge at ion source relevant parameters. Plasma Physics and Controlled Fusion, 2017, 59, 075008.	2.1	30
4	Correlation of Cs flux and work function of a converter surface during long plasma exposure for negative ion sources in view of ITER. Plasma Research Express, 2020, 2, 035009.	0.9	28
5	Influence of H <sub>2</sub> and D <sub>2</sub> plasmas on the work function of caesiated materials. Journal of Applied Physics, 2017, 122, .	2.5	26
6	Spectral intensity of the N <sub>2</sub> emission in argon low-pressure arc discharges for lighting purposes. New Journal of Physics, 2012, 14, 043016.	2.9	23
7	Status and future development of Heating and Current Drive for the EU DEMO. Fusion Engineering and Design, 2022, 180, 113159.	1.9	22
8	Technology developments for a beam source of an NNBI system for DEMO. Fusion Engineering and Design, 2018, 136, 340-344.	1.9	18
9	Generation of an atmospheric plasmoid from a water discharge: An analysis of the dissipated energy. Journal of Applied Physics, 2013, 114, .	2.5	17
10	Fundamental studies on the Cs dynamics under ion source conditions. Review of Scientific Instruments, 2014, 85, 02B109.	1.3	15
11	Influence of cesium on the plasma parameters in front of the plasma grid in sources for negative hydrogen ions. AIP Conference Proceedings, 2013, , .	0.4	14
12	Enhancing the accuracy of the Fowler method for monitoring non-constant work functions. Review of Scientific Instruments, 2016, 87, 043901.	1.3	14
13	Temperature dependence of the work function of caesiated materials under ion source conditions. AIP Conference Proceedings, 2015, , .	0.4	12
14	A collisional radiative model for low-pressure hydrogen caesium plasmas and its application to an RF source for negative hydrogen ions. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 149, 360-371.	2.3	10
15	Work function of Cs-free materials for enhanced H <sup>+</sup> surface production. AIP Conference Proceedings, 2018, , .	0.4	10
16	Simultaneous measurements of work function and H <sup>+</sup> density including caesiation of a converter surface. AIP Conference Proceedings, 2017, , .	0.4	9
17	Initial Phase of a Large Atmospheric Plasmoid Generated Above a Water Surface. IEEE Transactions on Plasma Science, 2014, 42, 2624-2625.	1.3	7
18	Correlation of size, velocity, and autonomous phase of a plasmoid in atmosphere with the dissipated energy. Journal of Applied Physics, 2015, 117, .	2.5	7

#	ARTICLE	IF	CITATIONS
19	Negative Hydrogen and Deuterium Ion Density in a Low Pressure Plasma in Front of a Converter Surface at Different Work Functions. <i>Plasma</i> , 2021, 4, 94-107.	1.8	7
20	Absolute radiometric calibration of a VUV spectrometer in the wavelength range 46–300 nm. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2021, 259, 107427.	2.3	6
21	Work function performance of a C12A7 electride surface exposed to low pressure low temperature hydrogen plasmas. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2021, 39, .	2.1	6
22	Emission spectroscopy of negative hydrogen ion sources: From VUV to IR. <i>Review of Scientific Instruments</i> , 2021, 92, 123510.	1.3	6
23	Application of a Langmuir probe AC technique for reliable access to the low energy range of electron energy distribution functions in low pressure plasmas. <i>Journal of Applied Physics</i> , 2020, 127, 113302.	2.5	5
24	Spatio-temporal structure and emission of a large plasmoid in atmosphere. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 095205.	2.8	4
25	The role of photon self-absorption on the H ( $n = 2$ ) density determination by means of VUV emission spectroscopy and TDLAS in low pressure plasmas. <i>Plasma Sources Science and Technology</i> , 2021, 30, 065013.	3.1	4
26	Impact of the photoelectric threshold sensitivity on the work function determination—Revealing ultra-low work functions of caesiated surfaces. <i>AIP Advances</i> , 2022, 12, .	1.3	4
27	Efficiency of Cs-free materials for negative ion production in H <sub>2</sub> and D <sub>2</sub> plasmas. <i>AIP Conference Proceedings</i> , 2017, , .	0.4	3
28	Workshop on performance variations in H <sup>-</sup> ion sources 2012: PV H <sup>-</sup> 12. <i>AIP Conference Proceedings</i> , 2013, , .	0.4	2
29	Laboratory experiment for the development of a laser neutralizer in view of DEMO NNBI. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	2
30	Dissociative recombination and its impact on the line profile of the hydrogen Balmer series. <i>Plasma Sources Science and Technology</i> , 2020, 29, 015014.	3.1	2
31	Work function behavior of a biased C12A7 electride in low temperature hydrogen plasmas. <i>AIP Conference Proceedings</i> , 2021, , .	0.4	2
32	Effect of a low pressure low temperature hydrogen plasma on the work function of europium. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2020, 38, 063002.	2.1	1
33	A collisional radiative model for caesium and its application to an RF source for negative hydrogen ions. <i>AIP Conference Proceedings</i> , 2015, , .	0.4	0
34	NIBS 2020 reference sheets. <i>AIP Conference Proceedings</i> , 2021, , .	0.4	0