

# Y S Hwang

## List of Publications by Year in descending order

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65  
papers

733  
citations

687363

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h-index

610901

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66  
all docs

66  
docs citations

66  
times ranked

533  
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of the formation of a fully pressure-driven tokamak*. Physics of Plasmas, 1994, 1, 1568-1575.	1.9	81
2	Internally generated currents in a small-aspect-ratio tokamak geometry. Physical Review Letters, 1992, 68, 3559-3562.	7.8	70
3	Design Features and Commissioning of the Versatile Experiment Spherical Torus (VEST) at Seoul National University. Plasma Science and Technology, 2013, 15, 244-251.	1.5	57
4	Numerical model for electrical explosion of copper wires in water. Journal of Applied Physics, 2016, 120, .	2.5	42
5	Properties of dc helicity injected tokamak plasmas. Physics of Fluids B, 1990, 2, 1415-1420.	1.7	31
6	Thermodynamics of a magnetically expanding plasma with isothermally behaving confined electrons. New Journal of Physics, 2018, 20, 063033.	2.9	30
7	Triton burnup measurements in KSTAR using a neutron activation system. Review of Scientific Instruments, 2016, 87, 11D828.	1.3	24
8	Magnetic confinement and instability in partially magnetized plasma. Plasma Sources Science and Technology, 2021, 30, 025011.	3.1	24
9	Ion-beam characteristics of novel helicon ion sources for different plasma parameters. Review of Scientific Instruments, 2000, 71, 1385-1388.	1.3	20
10	Development of a compact helicon ion source for neutron generators. Review of Scientific Instruments, 2004, 75, 1878-1880.	1.3	18
11	Development of a High-Current Helicon Ion Source With High Monatomic Fraction for the Application of Neutron Generators. IEEE Transactions on Plasma Science, 2007, 35, 1476-1479.	1.3	17
12	Effects of discharge chamber length on the negative ion generation in volume-produced negative hydrogen ion source. Review of Scientific Instruments, 2014, 85, 02B119.	1.3	17
13	Efficient pre-ionization by direct X-B mode conversion in VEST. Physics of Plasmas, 2017, 24, 012103.	1.9	15
14	Conceptual design of a helicon ion source for high-current dc accelerators. Review of Scientific Instruments, 1998, 69, 1344-1348.	1.3	13
15	Enhanced shock wave generation via pre-breakdown acceleration using water electrolysis in negative streamer pulsed spark discharges. Applied Physics Letters, 2018, 112, .	3.3	13
16	A simple spectroscopic method to determine the degree of dissociation in hydrogen plasmas with wide-range spectrometer. Review of Scientific Instruments, 2016, 87, 053503.	1.3	12
17	Underwater spark discharge with long transmission line for cleaning horizontal wells. Journal of Applied Physics, 2017, 121, .	2.5	12
18	Design of a single-channel millimeter-wave interferometer system for Korea Superconducting Tokamak Advanced Research. Review of Scientific Instruments, 2003, 74, 1613-1616.	1.3	11

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19	Observation of Nonclassical Radial Current Diffusion in a Fully Bootstrap Current Driven Tokamak. <i>Physical Review Letters</i> , 1996, 77, 3811-3814.	7.8	10
20	Development of a negative hydrogen ion source for tandem proton accelerator using transformer coupled plasma sources. <i>Review of Scientific Instruments</i> , 2002, 73, 979-982.	1.3	10
21	Enhanced surface production in H <sup>-</sup> ion sources by introducing a negatively biased secondary electrode. <i>Review of Scientific Instruments</i> , 2010, 81, 02A702.	1.3	10
22	Thermodynamic Properties and Electrical Conductivity of Water Plasma. <i>Contributions To Plasma Physics</i> , 2013, 53, 330-335.	1.1	10
23	Correlation of the peak pressure generated by an underwater spark discharge with energy absorption in a spark channel. <i>Journal of the Korean Physical Society</i> , 2015, 66, 1845-1851.	0.7	10
24	Reconstruction of current density distributions in the CDX-U tokamak. <i>Review of Scientific Instruments</i> , 1992, 63, 4747-4749.	1.3	9
25	Design of a far-infrared interferometer/polarimeter system for Korea Superconducting Tokamak Advanced Research. <i>Review of Scientific Instruments</i> , 2004, 75, 3402-3404.	1.3	9
26	New method of high brightness ion extraction based on bias electrode. <i>Review of Scientific Instruments</i> , 2006, 77, 03B507.	1.3	9
27	Characterization of plasma ion source utilizing anode spot with positively biased electrode for stable and high-current ion beam extraction. <i>Review of Scientific Instruments</i> , 2011, 82, 123303.	1.3	9
28	Kinetics of electrons and neutral particles in radio-frequency transformer coupled plasma H <sup>-</sup> ion source at Seoul National University. <i>New Journal of Physics</i> , 2016, 18, 105006.	2.9	9
29	Characterization of electron kinetics regime with electron energy probability functions in inductively coupled hydrogen plasmas. <i>Physics of Plasmas</i> , 2016, 23, 023511.	1.9	9
30	Optimization of plasma parameters with magnetic filter field and pressure to maximize H <sup>-</sup> ion density in a negative hydrogen ion source. <i>Review of Scientific Instruments</i> , 2016, 87, 02B136.	1.3	8
31	Measurement on the electrical conductivity of copper along the binodal curve in warm dense regime. <i>Applied Physics Letters</i> , 2021, 119, 174102.	3.3	8
32	Plasma transport control and self-sustaining fusion reactor. <i>Plasma Physics and Controlled Fusion</i> , 1997, 39, A361-A369.	2.1	7
33	Design of a dual sensor probe array for internal field measurement in Versatile Experiment Spherical Torus. <i>Review of Scientific Instruments</i> , 2012, 83, 10D721.	1.3	7
34	Initial operation results of NE213 scintillation detector for time-resolved measurements on triton burnup in KSTAR. <i>Review of Scientific Instruments</i> , 2018, 89, 10I118.	1.3	7
35	Beam emittance measurements of transformer coupled plasma ion source for focused ion beam. <i>Review of Scientific Instruments</i> , 2004, 75, 1681-1683.	1.3	6
36	Development of internal magnetic probe for current density profile measurement in Versatile Experiment Spherical Torus. <i>Review of Scientific Instruments</i> , 2014, 85, 11D809.	1.3	6

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37	Development of a novel radio-frequency negative hydrogen ion source in conically converging configuration. Review of Scientific Instruments, 2014, 85, 02B112.	1.3	6
38	Development of a radio frequency ion source with multi-helicon plasma injectors for neutral beam injection system of Versatile Experiment Spherical Torus. Review of Scientific Instruments, 2014, 85, 02B318.	1.3	5
39	One-dimensional full wave simulation on XB mode conversion in electron cyclotron heating. Physics of Plasmas, 2014, 21, 062108.	1.9	5
40	Radial profile measurement with an improved 1 kHz Thomson scattering system on Versatile Experiment Spherical Torus. Review of Scientific Instruments, 2021, 92, 043549.	1.3	5
41	Acceleration of ion rotation during internal reconnection events in the versatile experiment spherical torus (VEST). Nuclear Fusion, 2021, 61, 126011.	3.5	5
42	H <sup>-</sup> ion beam extraction from a transformer coupled plasma source with triode extraction system. Review of Scientific Instruments, 2006, 77, 03A536.	1.3	4
43	Brightness enhancement of plasma ion source by utilizing anode spot for nano applications. Review of Scientific Instruments, 2012, 83, 02B313.	1.3	4
44	Operating conditions for the generation of stable anode spot plasma in front of a positively biased electrode. Review of Scientific Instruments, 2014, 85, 02A508.	1.3	4
45	Electron cyclotron resonance heating by magnetic filter field in a negative hydrogen ion source. Review of Scientific Instruments, 2016, 87, 02B117.	1.3	4
46	Observations with a Mach probe on edge plasma of the CDX-U. Review of Scientific Instruments, 1997, 68, 986-989.	1.3	3
47	Feasibility experiments for electron ripple injection on current drive experiment-upgrade. Physics of Plasmas, 1998, 5, 966-972.	1.9	3
48	Feasibility study of a new negative ion source using a transformer coupled plasma source. Review of Scientific Instruments, 2000, 71, 943-945.	1.3	3
49	Enhancement in ion beam current with layered-glows in a constricted dc plasma ion source. Review of Scientific Instruments, 2010, 81, 02B309.	1.3	3
50	Design of interferometer system on Versatile Experiment Spherical Torus (VEST) at Seoul National University. Journal of Instrumentation, 2012, 7, C01107-C01107.	1.2	3
51	Characterization of photo-multiplier tube as ex-vessel radiation detector in tokamak. Review of Scientific Instruments, 2017, 88, 093503.	1.3	3
52	Simple and accurate method of diamagnetic flux measurement in Versatile Experimental Spherical Torus (VEST). Review of Scientific Instruments, 2018, 89, 103508.	1.3	3
53	High-current ion source development for the Korea Multipurpose Accelerator Complex. Review of Scientific Instruments, 2000, 71, 969-971.	1.3	2
54	Single and double null equilibria in the SMART Tokamak. Plasma Research Express, 2021, 3, 044001.	0.9	2

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55	Pressure Driven Currents in an ECH Heated, Low Aspect Ratio Torus. AIP Conference Proceedings, 1992, , .	0.4	1
56	Status of an RF Negative Hydrogen Ion Source using Transformer Coupled Plasma Source. AIP Conference Proceedings, 2002, , .	0.4	1
57	Development of a Cylindrical Neutron Generator using RF-driven Plasma. , 2006, , .		1
58	Study on monatomic fraction improvement with alumina layer on metal electrode in hydrogen plasma ion source. Review of Scientific Instruments, 2012, 83, 02B314.	1.3	1
59	Design of an imaging Fabry-Pérot interferometer for the VEST edge plasma temperature measurement. Review of Scientific Instruments, 2018, 89, 10D108.	1.3	1
60	Microwave polarimetry system in the CDX- $\beta$ tokamak. Review of Scientific Instruments, 1995, 66, 379-381.	1.3	0
61	Investigation of helium ion production in constricted direct current plasma ion source with layered-glow. Review of Scientific Instruments, 2014, 85, 02C105.	1.3	0
62	Electron density profile measurements from hydrogen line intensity ratio method in Versatile Experiment Spherical Torus. Review of Scientific Instruments, 2016, 87, 11E540.	1.3	0
63	Improved gating device of time-of-flight ion mass analyzer for ion sources. Review of Scientific Instruments, 2019, 90, 033305.	1.3	0
64	Identification of kink instability in 3D helical flux ropes at VEST. Physics of Plasmas, 2022, 29, 052112.	1.9	0
65	Investigation of the effect of pre-fill gas in VEST discharges by predictive transport simulations. Journal of the Korean Physical Society, 0, , .	0.7	0