

Richard J Hawryluk

List of Publications by Year in descending order

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112
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115
times ranked

1878
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#	ARTICLE	IF	CITATIONS
1	New techniques for calculating heat and particle source rates due to neutral beam injection in axisymmetric tokamaks. <i>Journal of Computational Physics</i> , 1981, 43, 61-78.	1.9	523
2	Study of High-Beta Magnetohydrodynamic Modes and Fast-Ion Losses in PDX. <i>Physical Review Letters</i> , 1983, 50, 891-895.	2.9	380
3	High-temperature plasmas in a tokamak fusion test reactor. <i>Physical Review Letters</i> , 1987, 58, 1004-1007.	2.9	238
4	Principal physics developments evaluated in the ITER design review. <i>Nuclear Fusion</i> , 2009, 49, 065012.	1.6	200
5	Bootstrap current in TFTR. <i>Physical Review Letters</i> , 1988, 60, 1306-1309.	2.9	170
6	Neoclassical conductivity of a tokamak plasma. <i>Nuclear Fusion</i> , 1977, 17, 611-614.	1.6	140
7	Energy dissipation in a thin polymer film by electron beam scattering. <i>Journal of Applied Physics</i> , 1974, 45, 2551-2566.	1.1	139
8	Fusion power production from TFTR plasmas fueled with deuterium and tritium. <i>Physical Review Letters</i> , 1994, 72, 3526-3529.	2.9	130
9	Baldur: A one-dimensional plasma transport code. <i>Computer Physics Communications</i> , 1988, 49, 275-398.	3.0	115
10	Neutral-Beam-Heating Results from the Princeton Large Torus. <i>Physical Review Letters</i> , 1979, 43, 270-274.	2.9	114
11	Results from deuterium-tritium tokamak confinement experiments. <i>Reviews of Modern Physics</i> , 1998, 70, 537-587.	16.4	113
12	Fusion plasma experiments on TFTR: A 20 year retrospective. <i>Physics of Plasmas</i> , 1998, 5, 1577-1589.	0.7	91
13	Confinement and heating of a deuterium-tritium plasma. <i>Physical Review Letters</i> , 1994, 72, 3530-3533.	2.9	90
14	Review of deuterium-tritium results from the Tokamak Fusion Test Reactor. <i>Physics of Plasmas</i> , 1995, 2, 2176-2188.	0.7	89
15	Fusion neutron production during deuterium neutral-beam injection into the PLT tokamak. <i>Nuclear Fusion</i> , 1981, 21, 67-81.	1.6	84
16	Low-Z impurity transport in tokamaks. <i>Nuclear Fusion</i> , 1979, 19, 607-632.	1.6	82
17	Prospects for pilot plants based on the tokamak, spherical tokamak and stellarator. <i>Nuclear Fusion</i> , 2011, 51, 103014.	1.6	77
18	Importance of plasma response to nonaxisymmetric perturbations in tokamaks. <i>Physics of Plasmas</i> , 2009, 16, 056115.	0.7	74

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19	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	1.6	70
20	High poloidal beta equilibria in the Tokamak Fusion Test Reactor limited by a natural inboard poloidal field null. Physics of Fluids B, 1991, 3, 2277-2284.	1.7	63
21	Development of ITER 15% MA ELMy H-mode inductive scenario. Nuclear Fusion, 2009, 49, 085034.	1.6	62
22	Progress towards high performance plasmas in the National Spherical Torus Experiment (NSTX). Nuclear Fusion, 2005, 45, S168-S180.	1.6	60
23	Overview of TFTR transport studies. Plasma Physics and Controlled Fusion, 1991, 33, 1509-1536.	0.9	59
24	Peaked density profiles in circular-limiter H-modes on the TFTR tokamak. Physical Review Letters, 1990, 65, 424-427.	2.9	58
25	Confinement studies of neutral beam heated discharges in TFTR. Plasma Physics and Controlled Fusion, 1986, 28, 17-27.	0.9	56
26	Effects of boronization of the first wall in TFTR. Journal of Nuclear Materials, 1990, 176-177, 337-342.	1.3	56
27	The effect of current profile evolution on plasma-limiter interaction and the energy confinement time. Nuclear Fusion, 1979, 19, 1307-1317.	1.6	50
28	Exposure and development models used in electron beam lithography. Journal of Vacuum Science and Technology, 1981, 19, 1-17.	1.9	50
29	The national spherical torus experiment (NSTX) research programme and progress towards high beta, long pulse operating scenarios. Nuclear Fusion, 2003, 43, 1653-1664.	1.6	49
30	Enhanced confinement in tokamaks. Physics of Fluids B, 1990, 2, 2941-2960.	1.7	48
31	Energy dissipation in a thin polymer film by electron beam scattering: Experiment. Journal of Applied Physics, 1975, 46, 2528-2537.	1.1	47
32	Correlations of heat and momentum transport in the TFTR tokamak. Physics of Fluids B, 1990, 2, 1300-1305.	1.7	47
33	TFTR Initial operations. Plasma Physics and Controlled Fusion, 1984, 26, 11-22.	0.9	45
34	Impurity levels and power loading in the pdx tokamak with high power neutral beam injection. Journal of Nuclear Materials, 1982, 111-112, 343-354.	1.3	41
35	Overview of DT results from TFTR. Nuclear Fusion, 1995, 35, 1429-1436.	1.6	41
36	Thermal energy confinement scaling in PDX limiter discharges. Nuclear Fusion, 1984, 24, 1303-1334.	1.6	40

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37	Alfven frequency modes at the edge of TFTR plasmas. Nuclear Fusion, 1995, 35, 1469-1479.	1.6	40
38	Overview of recent physics results from the National Spherical Torus Experiment (NSTX). Nuclear Fusion, 2007, 47, S645-S657.	1.6	40
39	Plasma wall interaction and tritium retention in TFTR. Journal of Nuclear Materials, 1997, 241-243, 214-226.	1.3	39
40	Effects of tungsten radiation on the behaviour of PLT tokamak discharges. Nuclear Fusion, 1978, 18, 1305-1307.	1.6	38
41	Overview of JET results. Nuclear Fusion, 2003, 43, 1540-1554.	1.6	38
42	Radiation losses in PLT during neutral-beam and ICRF heating experiments. Nuclear Fusion, 1981, 21, 981-991.	1.6	37
43	Initial limiter and getter operation in TFTR. Journal of Nuclear Materials, 1984, 128-129, 1-9.	1.3	35
44	High- β operation and magnetohydrodynamic activity on the TFTR tokamak. Physics of Fluids B, 1990, 2, 1287-1290.	1.7	35
45	TFTR DT experiments. Plasma Physics and Controlled Fusion, 1997, 39, B103-B114.	0.9	35
46	Effects of low-Z impurities during the start-up phase of a large tokamak. Nuclear Fusion, 1976, 16, 775-781.	1.6	34
47	Plasma Edge Cooling during rf Heating. Physical Review Letters, 1978, 40, 1649-1651.	2.9	34
48	Neutron emission from TFTR supershots. Nuclear Fusion, 1993, 33, 991-1007.	1.6	32
49	High power neutral beam heating experiments on TFTR with balanced and unbalanced momentum input. Plasma Physics and Controlled Fusion, 1987, 29, 1235-1245.	0.9	31
50	Particle fueling and impurity control in PDX. Journal of Nuclear Materials, 1984, 128-129, 330-339.	1.3	30
51	Low-Z impurities in the PLT Tokamak. Plasma Physics, 1978, 20, 723-734.	0.9	29
52	Deuterium-tritium plasmas in novel regimes in the Tokamak Fusion Test Reactor. Physics of Plasmas, 1997, 4, 1714-1724.	0.7	27
53	Initial Confinement Studies of Ohmically Heated Plasmas in the Tokamak Fusion Test Reactor. Physical Review Letters, 1984, 52, 1492-1495.	2.9	26
54	Transport and stability studies on TFTR. Plasma Physics and Controlled Fusion, 1988, 30, 1391-1403.	0.9	26

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55	Isotopic scaling of transport in deuterium-tritium plasmas. <i>Physica Scripta</i> , 1995, 51, 394-401.	1.2	25
56	Progress towards high-performance, steady-state spherical torus. <i>Plasma Physics and Controlled Fusion</i> , 2003, 45, A335-A350.	0.9	25
57	Status and Plans for TFTR. <i>Fusion Science and Technology</i> , 1992, 21, 1324-1331.	0.6	23
58	Alpha-particle physics in the tokamak fusion test reactor DT experiment. <i>Plasma Physics and Controlled Fusion</i> , 1997, 39, A275-A283.	0.9	23
59	Recent D-T results on TFTR. <i>Plasma Physics and Controlled Fusion</i> , 1995, 37, A69-A85.	0.9	22
60	ICRF results in D-T plasmas in JET and TFTR and implications for ITER. <i>Plasma Physics and Controlled Fusion</i> , 1998, 40, A87-A103.	0.9	22
61	First observation of ELM pacing with vertical jogs in a spherical torus. <i>Nuclear Fusion</i> , 2010, 50, 064015.	1.6	22
62	Observations of changes in residual gas and surface composition with discharge cleaning in PLT. <i>Journal of Vacuum Science and Technology</i> , 1979, 16, 752-757.	1.9	21
63	Volt-second consumption during the start-up phase of PLT. <i>Nuclear Fusion</i> , 1979, 19, 1519-1522.	1.6	20
64	PDX Divertor operation. <i>Journal of Nuclear Materials</i> , 1980, 93-94, 213-219.	1.3	20
65	Initial conditioning of the TFTR vacuum vessel. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1984, 2, 1188-1192.	0.9	20
66	First-Wall and limiter conditioning in TFTR. <i>Journal of Nuclear Materials</i> , 1984, 128-129, 861-866.	1.3	18
67	Deuterium and tritium experiments on TFTR. <i>Plasma Physics and Controlled Fusion</i> , 1994, 36, B3-B15.	0.9	18
68	Plasma-surface interactions in TFTR DT experiments. <i>Journal of Nuclear Materials</i> , 1995, 220-222, 62-72.	1.3	18
69	Transitionless enhanced confinement and the role of radial electric field shear. <i>Physics of Plasmas</i> , 2000, 7, 615-625.	0.7	18
70	Experimental study of forbidden optical transitions in a dense, laser-produced plasma. <i>Physical Review A</i> , 1974, 10, 265-277.	1.0	17
71	High- Q plasmas in the TFTR tokamak. <i>Physics of Fluids B</i> , 1991, 3, 2308-2314.	1.7	17
72	Ion Heating with High-Power Perpendicular Neutral-Beam Injection in the Poloidal Divertor Experiment (PDX). <i>Physical Review Letters</i> , 1982, 49, 326-329.	2.9	16

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73	Control of plasma stored energy for burn control using DIII-D in-vessel coils. Nuclear Fusion, 2015, 55, 053001.	1.6	16
74	TFTR confinement results. Plasma Physics and Controlled Fusion, 1986, 28, 1329-1340.	0.9	15
75	Results from D ⁺ T experiments on TFTR and implications for achieving an ignited plasma. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 1999, 357, 443-469.	1.6	15
76	Magnetic diagnostics and feedback control on TFTR (invited). Review of Scientific Instruments, 1985, 56, 941-946.	0.6	14
77	Observation of inverted population levels in the FM ⁺ spherator. Applied Physics Letters, 1976, 29, 537-539.	1.5	13
78	Tritium Processing and Management During D-T Experiments on TFTR. Fusion Science and Technology, 1994, 26, 427-433.	0.6	13
79	The challenge and promise of studying burning plasmas. Physics Today, 2019, 72, 34-40.	0.3	13
80	Stark profiles of forbidden and allowed transitions in a dense, laser produced helium plasma. Journal of Physics B: Atomic and Molecular Physics, 1972, 5, 1017-1030.	1.6	12
81	Quenching of the current-driven ion-wave instability in the trapped-electron regime in a toroidal plasma. Physics of Fluids, 1977, 20, 95.	1.4	11
82	Discharge cleaning on Tokamak Fusion Test Reactor after boronization. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1991, 9, 2713-2715.	0.9	11
83	Operation at the tokamak equilibrium poloidal beta-limit in TFTR. Nuclear Fusion, 1992, 32, 1468-1473.	1.6	11
84	An overview of the iter in-vessel coil systems. , 2009, , .		11
85	Titanium Density Measurements in the Pdx Tokamak Using a Ti XVII Forbidden Line. Nuclear Fusion, 1979, 19, 1681-1683.	1.6	10
86	TFTR Plasma Feedback Systems. Fusion Science and Technology, 1985, 8, 1807-1812.	0.6	10
87	Acceleration of Beam Ions during Major-Radius Compression in the Tokamak Fusion Test Reactor. Physical Review Letters, 1985, 55, 2587-2590.	2.9	10
88	Deuterium-Tritium Experiments on the Tokamak Fusion Test Reactor. Fusion Science and Technology, 1994, 26, 389-398.	0.6	10
89	Confinement Studies In TFTR. Fusion Science and Technology, 1985, 8, 657-663.	0.6	8
90	Long and short term trends in vessel conditioning of TFTR. Journal of Nuclear Materials, 1987, 145-147, 781-786.	1.3	7

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91	Preparations for deuterium-tritium experiments on the Tokamak Fusion Test Reactor*. Physics of Plasmas, 1994, 1, 1560-1567.	0.7	7
92	Inhibition of the Current-Driven Ion-Wave Instability in the Trapped-Electron Regime in the FM-1 Spherator. Physical Review Letters, 1976, 36, 726-729.	2.9	6
93	Tokamak Fusion Test Reactor gas injection control system design and operation. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1986, 4, 317-321.	0.9	6
94	Impurity Transport in the FM-1 Spherator. Physical Review Letters, 1974, 33, 1272-1275.	2.9	4
95	RF-heating near the lower hybrid frequency in the FM-1 spherator. Nuclear Fusion, 1976, 16, 419-426.	1.6	4
96	Carbon influx flow rate in an Ohmically heated plasma in the FM-1 spherator. Nuclear Fusion, 1976, 16, 797-804.	1.6	3
97	Neutral beam injection on the Tokamak fusion test reactor. Nuclear Instruments & Methods in Physics Research B, 1987, 24-25, 741-745.	0.6	3
98	Scientific Challenges, Opportunities and Priorities for the U.S. Fusion Energy Sciences Program. Journal of Fusion Energy, 2005, 24, 13-114.	0.5	3
99	Observation of magnetic islands in the FM-1 spherator. Physics of Fluids, 1976, 19, 1805.	1.4	2
100	Energy loss rates of energetic ions injected into the FM-1 spherator. Physics of Fluids, 1977, 20, 1571.	1.4	2
101	Results of NSTX heating experiments. IEEE Transactions on Plasma Science, 2003, 31, 60-67.	0.6	2
102	23rd IAEA Fusion Energy Conference: summary of sessions EX/C and ICC. Nuclear Fusion, 2011, 51, 094005.	1.6	2
103	PBX-M upgrade for advanced stabilization and profile control studies. , 0, , .		1
104	The operation of the TFTR tritium system. , 0, , .		1
105	Improvement of Plasma Radial Position Control in PDX through an Automated Learning Procedure. IEEE Transactions on Plasma Science, 1982, 10, 99-105.	0.6	0
106	Progress in the neutral beam injection heating experiment on the Tokamak fusion test reactor. Nuclear Instruments & Methods in Physics Research B, 1989, 40-41, 996-999.	0.6	0
107	Deuterium-tritium experiments on TFTR. AIP Conference Proceedings, 1995, , .	0.3	0
108	Title is missing!. Journal of Fusion Energy, 2000, 19, 35-44.	0.5	0

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109	Report of the FESAC Panel on a Burning Plasma Program Strategy to Advance Fusion Energy. Journal of Fusion Energy, 2001, 20, 85-112.	0.5	0
110	Development of a Silicon-Based Electron Beam Transmission Window for Use in a KrF Excimer Laser System. Fusion Science and Technology, 2003, 43, 414-419.	0.6	0
111	Qualification of NSTX-U Inner TF Bundle Using Hi-Fidelity Models. Fusion Science and Technology, 2021, 77, 658-675.	0.6	0
112	Control of TFTR during DT operations. , 0, , .		0