

# Jan Mlynar

## List of Publications by Year in descending order

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102  
papers

2,270  
citations

218677

26  
h-index

243625

44  
g-index

104  
all docs

104  
docs citations

104  
times ranked

1791  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the COMPASS results <sup>*</sup> . Nuclear Fusion, 2022, 62, 042021.	3.5	7
2	Shattered pellet injection experiments at JET in support of the ITER disruption mitigation system design. Nuclear Fusion, 2022, 62, 026012.	3.5	25
3	Progress in HXR diagnostics at GOLEM and COMPASS tokamaks. Journal of Instrumentation, 2022, 17, C01033.	1.2	4
4	Full conversion from ohmic to runaway electron driven current via massive gas injection in the TCV tokamak. Nuclear Fusion, 2022, 62, 076038.	3.5	5
5	Detection of runaway electrons at the COMPASS tokamak using a Timepix3-based semiconductor detector. Journal of Instrumentation, 2022, 17, P02030.	1.2	0
6	More than 30 years of experience in fusion education at the Institute of Plasma Physics of the Czech Academy of Sciences. European Journal of Physics, 2021, 42, 045703.	0.6	4
7	Conceptual design of tomographic soft X-ray detectors for COMPASS-U tokamak. Fusion Engineering and Design, 2021, 168, 112656.	1.9	5
8	Cherenkov probes and runaway electrons diagnostics. European Physical Journal Plus, 2021, 136, 1.	2.6	2
9	Tomotok: python package for tomography of tokamak plasma radiation. Journal of Instrumentation, 2021, 16, C12015.	1.2	3
10	A total neutron yield constraint implemented to the RNC emissivity reconstruction on ITER tokamak. Fusion Engineering and Design, 2020, 160, 111840.	1.9	2
11	Study of Runaway Electrons in GOLEM Tokamak. Journal of Instrumentation, 2019, 14, C09029-C09029.	1.2	0
12	Deep neural networks for plasma tomography with applications to JET and COMPASS. Journal of Instrumentation, 2019, 14, C09011-C09011.	1.2	6
13	Hard X-ray Bremsstrahlung of relativistic Runaway Electrons in JET. Journal of Instrumentation, 2019, 14, C09042-C09042.	1.2	5
14	Runaway electron diagnostics for the COMPASS tokamak using EC emission. EPJ Web of Conferences, 2019, 203, 03006.	0.3	1
15	Physics research on the TCV tokamak facility: from conventional to alternative scenarios and beyond. Nuclear Fusion, 2019, 59, 112023.	3.5	43
16	Runaway electron beam stability and decay in COMPASS. Nuclear Fusion, 2019, 59, 096036.	3.5	16
17	Experimental Runaway Electron Current Estimation in COMPASS Tokamak. Atoms, 2019, 7, 12.	1.6	10
18	Comparative analysis and new post-processing methods for plasma tomography at tokamaks. Journal of Instrumentation, 2019, 14, C11001-C11001.	1.2	3

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19	Radiometry for the vertical electron cyclotron emission from the runaway electrons at the COMPASS tokamak. Review of Scientific Instruments, 2019, 90, 113501.	1.3	3
20	Analysis of deposited layers with deuterium and impurity elements on samples from the divertor of JET with ITER-like wall. Journal of Nuclear Materials, 2019, 516, 202-213.	2.7	18
21	Runaway electrons diagnostics using segmented semiconductor detectors. Fusion Engineering and Design, 2019, 146, 316-319.	1.9	4
22	Current Research into Applications of Tomography for Fusion Diagnostics. Journal of Fusion Energy, 2019, 38, 458-466.	1.2	33
23	Runaway electron beam control. Plasma Physics and Controlled Fusion, 2019, 61, 014036.	2.1	26
24	Runaway electron experiments at COMPASS in support of the EUROfusion ITER physics research. Plasma Physics and Controlled Fusion, 2019, 61, 014010.	2.1	36
25	Comparison of runaway electron generation parameters in small, medium-sized and large tokamaks – A survey of experiments in COMPASS, TCV, ASDEX-Upgrade and JET. Nuclear Fusion, 2018, 58, 016014.	3.5	12
26	First Measurement of X-rays Generated by Runaway Electrons in Tokamaks Using a TimePix3 Device with 1 mm thick Silicon Sensor. , 2018, , .		1
27	Studies of runaway electrons via Cherenkov effect in tokamaks. Journal of Physics: Conference Series, 2018, 959, 012002.	0.4	14
28	Losses of runaway electrons in MHD-active plasmas of the COMPASS tokamak. Nuclear Fusion, 2017, 57, 076002.	3.5	18
29	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. Nature Physics, 2017, 13, 973-978.	16.7	73
30	Conceptual design of the COMPASS upgrade tokamak. Fusion Engineering and Design, 2017, 123, 11-16.	1.9	49
31	Overview of progress in European medium sized tokamaks towards an integrated plasma-edge/wall solution <sup>a</sup>. Nuclear Fusion, 2017, 57, 102014.	3.5	23
32	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
33	Progress in diagnostics of the COMPASS tokamak. Journal of Instrumentation, 2017, 12, C12015-C12015.	1.2	10
34	Development of a Cherenkov-type diagnostic system to study runaway electrons within the COMPASS tokamak. Journal of Instrumentation, 2017, 12, C10014-C10014.	1.2	8
35	Tomographic capabilities of the new GEM based SXR diagnostic of WEST. Journal of Instrumentation, 2016, 11, C07006-C07006.	1.2	12
36	Soft X-ray tomography in support of impurity control in tokamaks. Journal of Physics: Conference Series, 2016, 768, 012001.	0.4	3

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37	Optimization of soft X-ray tomography on the COMPASS tokamak. Nukleonika, 2016, 61, 403-408.	0.8	7
38	Remote operation of the GOLEM tokamak with hydrogen and helium plasmas. Journal of Physics: Conference Series, 2016, 768, 012002.	0.4	8
39	Minimum Fisher Tikhonov Regularization Adapted to Real-Time Tomography. Fusion Science and Technology, 2016, 69, 505-513.	1.1	11
40	Optimization of ICRH for core impurity control in JET-ILW. Nuclear Fusion, 2016, 56, 036022.	3.5	59
41	Status of the COMPASS tokamak and characterization of the first H-mode. Plasma Physics and Controlled Fusion, 2016, 58, 014015.	2.1	70
42	Post-disruptive runaway electron beams in the COMPASS tokamak. Journal of Plasma Physics, 2015, 81, .	2.1	16
43	ICRH for core impurity mitigation in JET-ILW. AIP Conference Proceedings, 2015, , .	0.4	2
44	Runaway electron beam generation and mitigation during disruptions at JET-ILW. Nuclear Fusion, 2015, 55, 093013.	3.5	58
45	Radiation asymmetries during the thermal quench of massive gas injection disruptions in JET. Nuclear Fusion, 2015, 55, 123027.	3.5	21
46	Soft X-ray tomographic reconstruction of JET ILW plasmas with tungsten impurity and different spectral response of detectors. Fusion Engineering and Design, 2015, 96-97, 869-872.	1.9	5
47	Design of soft-X-ray tomographic system in WEST using GEM detectors. Fusion Engineering and Design, 2015, 96-97, 856-860.	1.9	37
48	ITER-like current ramps in JET with ILW: experiments, modelling and consequences for ITER. Nuclear Fusion, 2015, 55, 013009.	3.5	5
49	Runaway beam studies during disruptions at JET-ILW. Journal of Nuclear Materials, 2015, 463, 143-149.	2.7	12
50	Theoretical description of heavy impurity transport and its application to the modelling of tungsten in JET and ASDEX upgrade. Plasma Physics and Controlled Fusion, 2015, 57, 014031.	2.1	107
51	First dedicated observations of runaway electrons in the COMPASS tokamak. Nukleonika, 2015, 60, 249-255.	0.8	8
52	Use of soft x-ray diagnostic on the COMPASS tokamak for investigations of sawteeth crash neighborhood and of plasma position using fast inversion methods. Review of Scientific Instruments, 2014, 85, 11E433.	1.3	5
53	Plasma tomographic reconstruction from tangentially viewing camera with background subtraction. Review of Scientific Instruments, 2014, 85, 013509.	1.3	21
54	Comparison of ICRF and NBI heated plasmas performances in the JET ITER-like wall. , 2014, , .		2

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55	ICRF heating in JET during initial operations with the ITER-like wall. , 2014, , .		3
56	Ion cyclotron resonance frequency heating in JET during initial operations with the ITER-like wall. Physics of Plasmas, 2014, 21, 061510.	1.9	16
57	Tungsten transport in JET H-mode plasmas in hybrid scenario, experimental observations and modelling. Nuclear Fusion, 2014, 54, 083028.	3.5	139
58	Comparison of Advanced Machine Learning Tools for Disruption Prediction and Disruption Studies. IEEE Transactions on Plasma Science, 2013, 41, 1751-1759.	1.3	8
59	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
60	Observations on the W-transport in the core plasma of JET and ASDEX Upgrade. Plasma Physics and Controlled Fusion, 2013, 55, 124036.	2.1	81
61	Low cost alternative of high speed visible light camera for tokamak experiments. Review of Scientific Instruments, 2012, 83, 10E505.	1.3	6
62	Introducing minimum Fisher regularisation tomography to AXUV and soft x-ray diagnostic systems of the COMPASS tokamak. Review of Scientific Instruments, 2012, 83, 10E531.	1.3	18
63	Experimental investigation of the confinement of $d(\langle \sup 3 \rangle \text{He}, p) \langle i \rangle \hat{\pm} \langle /i \rangle$ and $d(d, p)t$ fusion reaction products in JET. Nuclear Fusion, 2012, 52, 083004.	3.5	4
64	Modern numerical methods for plasma tomography optimisation. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2012, 686, 156-161.	1.6	42
65	First fusion proton measurements in TEXTOR plasmas using activation technique. Review of Scientific Instruments, 2012, 83, 10D318.	1.3	0
66	Soft x-ray tomography for real-time applications: present status at Tore Supra and possible future developments. Review of Scientific Instruments, 2012, 83, 063505.	1.3	35
67	Detecting non-Maxwellian electron velocity distributions at JET by high resolution Thomson scattering. Review of Scientific Instruments, 2011, 82, 033514.	1.3	16
68	Overview of the COMPASS diagnostics. Fusion Engineering and Design, 2011, 86, 1227-1231.	1.9	41
69	Multi-mode remote participation on the GOLEM tokamak. Fusion Engineering and Design, 2011, 86, 1310-1314.	1.9	28
70	Fusion alpha loss diagnostic for ITER using activation technique. Fusion Engineering and Design, 2011, 86, 1298-1301.	1.9	3
71	Evaluation of the Faraday angle by numerical methods and comparison with the Tore Supra and JET polarimeter electronics. Review of Scientific Instruments, 2011, 82, 043502.	1.3	2
72	Inversion Techniques in the Soft-X-Ray Tomography of Fusion Plasmas: Toward Real-Time Applications. Fusion Science and Technology, 2010, 58, 733-741.	1.1	15

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73	Interlock system for the COMPASS tokamak. Fusion Engineering and Design, 2010, 85, 505-508.	1.9	4
74	Design of multi-range tomographic system for transport studies in tokamak plasmas. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2010, 623, 806-808.	1.6	11
75	Charged fusion product loss measurements using nuclear activation. Review of Scientific Instruments, 2010, 81, 10D331.	1.3	2
76	New developments in the diagnostics for the fusion products on JET in preparation for ITER (invited). Review of Scientific Instruments, 2010, 81, 10E136.	1.3	12
77	A novel method for trace tritium transport studies. Nuclear Fusion, 2009, 49, 085025.	3.5	5
78	NEUTRON SPECTRA UNFOLDING WITH MINIMUM FISHER REGULARISATION. , 2007, , .		3
79	NEUTRON DIAGNOSTICS FOR REACTOR SCALE FUSION EXPERIMENTS. , 2007, , .		2
80	Progress in neutron diagnostics at JET. European Physical Journal D, 2006, 56, B118-B124.	0.4	0
81	Study of runaway electron generation during major disruptions in JET. Nuclear Fusion, 2006, 46, 277-284.	3.5	98
82	Neutron profiles and fuel ratio $T/nD$ measurements in JET ELMy H-mode plasmas with tritium puff. Nuclear Fusion, 2006, 46, 725-740.	3.5	16
83	First results of Minimum Fisher Regularisation as unfolding method for JET NE213 liquid scintillator neutron spectrometry. Fusion Engineering and Design, 2005, 74, 781-786.	1.9	12
84	"Burning plasma" diagnostics for the physics of JET and ITER. Plasma Physics and Controlled Fusion, 2005, 47, B249-B262.	2.1	18
85	JET: Preparing the future in fusion. European Physical Journal D, 2004, 54, C28-C38.	0.4	1
86	Upgrade of the diagnostic neutral beam injector for the TCV tokamak. Fusion Engineering and Design, 2003, 66-68, 899-904.	1.9	17
87	Present and perspective roles of soft X-ray tomography in tokamak plasma position measurements. Fusion Engineering and Design, 2003, 66-68, 905-909.	1.9	9
88	An overview of results from the TCV tokamak. Nuclear Fusion, 2003, 43, 1619-1631.	3.5	25
89	Overview of JET results. Nuclear Fusion, 2003, 43, 1540-1554.	3.5	38
90	Investigation of the consistency of magnetic and soft x-ray plasma position measurements on TCV by means of a rapid tomographic inversion algorithm. Plasma Physics and Controlled Fusion, 2003, 45, 169-180.	2.1	27

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91	Shape dependence of sawtooth inversion radii and profile peaking factors in TCV L mode plasmas. Nuclear Fusion, 2002, 42, 136-142.	3.5	29
92	Extension of the TCV operating space towards higher elongation and higher normalized current. Nuclear Fusion, 2002, 42, 743-749.	3.5	11
93	ECH physics and new operational regimes on TCV. Plasma Physics and Controlled Fusion, 2002, 44, B85-B97.	2.1	5
94	Overview of TCV results. Nuclear Fusion, 2001, 41, 1459-1472.	3.5	3
95	Stability and energy confinement of highly elongated plasmas in TCV. Plasma Physics and Controlled Fusion, 2001, 43, A161-A173.	2.1	18
96	Steady-state fully noninductive operation with electron cyclotron current drive and current profile control in the tokamak Å configuration variable (TCV). Physics of Plasmas, 2001, 8, 2199-2207.	1.9	40
97	Steady-State Fully Noninductive Current Driven by Electron Cyclotron Waves in a Magnetically Confined Plasma. Physical Review Letters, 2000, 84, 3322-3325.	7.8	102
98	High-power ECH and fully non-inductive operation with ECCD in the TCV tokamak. Plasma Physics and Controlled Fusion, 2000, 42, B311-B321.	2.1	43
99	Energy confinement and MHD activity in shaped TCV plasmas with localized electron cyclotron heating. Nuclear Fusion, 1999, 39, 1807-1818.	3.5	60
100	Fast bolometric measurements on the TCV tokamak. Review of Scientific Instruments, 1999, 70, 4552-4556.	1.3	26
101	Pixels method computer tomography in polar coordinates. European Physical Journal D, 1995, 45, 799-816.	0.4	7
102	Full conversion from Ohmic to runaway electron driven current via massive gas injection in the TCV tokamak. Nuclear Fusion, 0, , .	3.5	1