

# Jan Horacek

## List of Publications by Year in descending order

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125  
papers

3,671  
citations

109321

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161849

54  
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126  
all docs

126  
docs citations

126  
times ranked

2175  
citing authors

#	ARTICLE	IF	CITATIONS
1	Overview of the COMPASS results <sup>*</sup>. Nuclear Fusion, 2022, 62, 042021.	3.5	7
2	Conceptual design of reciprocating probes and material-testing manipulator for tokamak COMPASS Upgrade. Journal of Instrumentation, 2022, 17, C02007.	1.2	3
3	Overview of the TCV tokamak experimental programme. Nuclear Fusion, 2022, 62, 042018.	3.5	30
4	Statistical properties of ion and electron temperature fluctuations in the edge of the COMPASS tokamak. Plasma Physics and Controlled Fusion, 2022, 64, 055021.	2.1	1
5	3D deposition patterns of deuterium retention and impurities in the COMPASS divertor: a data-driven root cause analysis and prediction approach. Fusion Engineering and Design, 2022, 179, 113118.	1.9	1
6	Ion temperature measurements in the tokamak scrape-off layer with high temporal resolution. Nuclear Fusion, 2021, 61, 036023.	3.5	5
7	Theory-based scaling laws of near and far scrape-off layer widths in single-null L-mode discharges. Nuclear Fusion, 2021, 61, 076002.	3.5	19
8	Predictive modelling of liquid metal divertor: from COMPASS tokamak towards Upgrade. Physica Scripta, 2021, 96, 124013.	2.5	11
9	Preliminary design of the COMPASS upgrade tokamak. Fusion Engineering and Design, 2021, 169, 112490.	1.9	33
10	On the transport of edge localized mode filaments in the tokamak scrape-off layer. Nuclear Fusion, 2020, 60, 096014.	3.5	18
11	Overview of power exhaust experiments in the COMPASS divertor with liquid metals. Nuclear Materials and Energy, 2020, 25, 100801.	1.3	13
12	Modeling of COMPASS tokamak divertor liquid metal experiments. Nuclear Materials and Energy, 2020, 25, 100860.	1.3	10
13	Scaling of L-mode heat flux for ITER and COMPASS-U divertors, based on five tokamaks. Nuclear Fusion, 2020, 60, 066016.	3.5	26
14	Physics research on the TCV tokamak facility: from conventional to alternative scenarios and beyond. Nuclear Fusion, 2019, 59, 112023.	3.5	43
15	Divertor impurity seeding experiments at the COMPASS tokamak. Nuclear Fusion, 2019, 59, 106035.	3.5	27
16	Constraints on conceptual design of diagnostics for the high magnetic field COMPASS-U tokamak with hot walls. Fusion Engineering and Design, 2019, 146, 1703-1707.	1.9	19
17	Approximation of the economy of fusion energy. Energy, 2018, 152, 489-497.	8.8	47
18	Heat loads on poloidal and toroidal edges of castellated plasma-facing components in COMPASS. Nuclear Fusion, 2018, 58, 066003.	3.5	11

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19	Plans for Liquid Metal Divertor in Tokamak Compass. Plasma Physics Reports, 2018, 44, 652-656.	0.9	10
20	Filamentary velocity scaling validation in the TCV tokamak. Physics of Plasmas, 2018, 25, .	1.9	35
21	Power deposition on misaligned edges in COMPASS. Nuclear Materials and Energy, 2017, 12, 1374-1378.	1.3	3
22	The DEMO wall load challenge. Nuclear Fusion, 2017, 57, 046002.	3.5	65
23	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. Nature Physics, 2017, 13, 973-978.	16.7	73
24	Feasibility study of fast swept divertor strike point suppressing transient heat fluxes in big tokamaks. Fusion Engineering and Design, 2017, 123, 646-649.	1.9	6
25	Conceptual design of the COMPASS upgrade tokamak. Fusion Engineering and Design, 2017, 123, 11-16.	1.9	49
26	Physics conclusions in support of ITER W divertor monoblock shaping. Nuclear Materials and Energy, 2017, 12, 60-74.	1.3	128
27	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
28	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
29	Poloidal asymmetry in the narrow heat flux feature in the TCV scrape-off layer. Physics of Plasmas, 2017, 24, .	1.9	22
30	Electron temperature and heat load measurements in the COMPASS divertor using the new system of probes. Nuclear Fusion, 2017, 57, 116017.	3.5	27
31	Progress in diagnostics of the COMPASS tokamak. Journal of Instrumentation, 2017, 12, C12015-C12015.	1.2	10
32	Understanding and suppressing the near scrape-off layer heat flux feature in inboard-limited plasmas in TCV. Nuclear Fusion, 2017, 57, 126029.	3.5	15
33	Overview of recent physics results from MAST. Nuclear Fusion, 2017, 57, 102007.	3.5	16
34	Fast measurements of the electron temperature and parallel heat flux in ELMy H-mode on the COMPASS tokamak. Nuclear Fusion, 2017, 57, 022010.	3.5	11
35	Investigation of transient melting of tungsten by ELMs in ASDEX Upgrade. Physica Scripta, 2017, T170, 014030.	2.5	19
36	Overview of the TCV tokamak program: scientific progress and facility upgrades. Nuclear Fusion, 2017, 57, 102011.	3.5	52

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37	Electromagnetic characteristics of geodesic acoustic mode in the COMPASS tokamak. Nuclear Fusion, 2017, 57, 126048.	3.5	29
38	Experimental estimation of tungsten impurity sputtering due to Type I ELMs in JET-ITER-like wall using pedestal electron cyclotron emission and target Langmuir probe measurements. Physica Scripta, 2016, T167, 014005.	2.5	31
39	Scrape-off layer turbulence in TCV: evidence in support of stochastic modelling. Plasma Physics and Controlled Fusion, 2016, 58, 044006.	2.1	37
40	Profile measurements of the electron temperature on the ASDEX Upgrade, COMPASS, and ISTTOK tokamak using Thomson scattering, triple, and ball-pen probes. Review of Scientific Instruments, 2016, 87, 043510.	1.3	23
41	A theoretical interpretation of the main scrape-off layer heat-flux width scaling for tokamak inner-wall limited plasmas. Plasma Physics and Controlled Fusion, 2016, 58, 084003.	2.1	19
42	Multi-machine scaling of the main SOL parallel heat flux width in tokamak limiter plasmas. Plasma Physics and Controlled Fusion, 2016, 58, 074005.	2.1	36
43	Status of the COMPASS tokamak and characterization of the first H-mode. Plasma Physics and Controlled Fusion, 2016, 58, 014015.	2.1	70
44	Narrow heat flux channels in the COMPASS limiter scrape-off layer. Journal of Nuclear Materials, 2015, 463, 385-388.	2.7	29
45	Bi-Maxwellian electron energy distribution function in the vicinity of the last closed flux surface in fusion plasma. Plasma Physics and Controlled Fusion, 2015, 57, 115011.	2.1	18
46	Understanding narrow SOL power flux component in COMPASS limiter plasmas by use of Langmuir probes. Journal of Nuclear Materials, 2015, 463, 381-384.	2.7	19
47	Assessment of the effect of parallel temperature gradients in the JET SOL on T measured by divertor target Langmuir probes. Journal of Nuclear Materials, 2015, 463, 432-435.	2.7	4
48	Intermittent fluctuations in the TCV scrape-off layer. Nuclear Fusion, 2015, 55, 062002.	3.5	32
49	COMPARISON BETWEEN 2D TURBULENCE MODEL ESEL AND EXPERIMENTAL DATA FROM AUG AND COMPASS TOKAMAKS. Acta Polytechnica, 2015, 55, 128-135.	0.6	3
50	Overview of the JET results. Nuclear Fusion, 2015, 55, 104001.	3.5	50
51	An Automatic Algorithm for Tracking Small Intestine in CT Enterography. , 2015, , .		0
52	ELM induced tungsten melting and its impact on tokamak operation. Journal of Nuclear Materials, 2015, 463, 78-84.	2.7	53
53	ELM-induced transient tungsten melting in the JET divertor. Nuclear Fusion, 2015, 55, 023010.	3.5	83
54	Impact of a narrow limiter SOL heat flux channel on the ITER first wall panel shaping. Nuclear Fusion, 2015, 55, 033019.	3.5	54

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55	Ion target impact energy during Type I edge localized modes in JET ITER-like Wall. Plasma Physics and Controlled Fusion, 2015, 57, 085006.	2.1	44
56	Thermal analysis of an exposed tungsten edge in the JET divertor. Journal of Nuclear Materials, 2015, 463, 415-419.	2.7	14
57	Overview of MAST results. Nuclear Fusion, 2015, 55, 104008.	3.5	16
58	Evaluation of the scrape-off-layer plasma parameters by a horizontal reciprocating Langmuir probe in the COMPASS tokamak. Journal of Physics: Conference Series, 2014, 514, 012049.	0.4	0
59	Direct Plasma Potential Measurements by Ballâ€Pen Probe and Selfâ€Emitting Langmuir Probe on COMPASS and ASDEX Upgrade. Contributions To Plasma Physics, 2014, 54, 279-284.	1.1	28
60	Characterization of scrape-off layer transport in JET limiter plasmas. Nuclear Fusion, 2014, 54, 083022.	3.5	14
61	Langmuir Probe Evaluation of the Plasma Potential in Tokamak Edge Plasma for Nonâ€Maxwellian EEDF. Contributions To Plasma Physics, 2014, 54, 267-272.	1.1	19
62	Overview of physics results from MAST towards ITER/DEMO and the MAST Upgrade. Nuclear Fusion, 2013, 53, 104008.	3.5	21
63	Overview of the JET results with the ITER-like wall. Nuclear Fusion, 2013, 53, 104002.	3.5	70
64	Theory-based scaling of the SOL width in circular limited tokamak plasmas. Nuclear Fusion, 2013, 53, 122001.	3.5	49
65	Comparison of scrape-off layer transport in inner and outer wall limited JET plasmas. Journal of Nuclear Materials, 2013, 438, S189-S193.	2.7	11
66	Scrape-off layer properties of ITER-like limiter start-up plasmas in JET. Nuclear Fusion, 2013, 53, 073016.	3.5	51
67	Intermittent transport across the scrape-off layer: latest results from ASDEX Upgrade. Nuclear Fusion, 2013, 53, 073047.	3.5	17
68	Discontinuous Galerkin method for coupled problems of compressible flow and elastic structures. , 2013, , .		0
69	Discontinuous Galerkin method for the problem of linear elasticity with applications to the fluid-structure interaction. , 2013, , .		2
70	The COMPASS Tokamak Plasma Control Software Performance. IEEE Transactions on Nuclear Science, 2011, 58, 1490-1496.	2.0	10
71	Steady-state and time-dependent modelling of parallel transport in the scrape-off layer. Plasma Physics and Controlled Fusion, 2011, 53, 065004.	2.1	14
72	Overview of the COMPASS diagnostics. Fusion Engineering and Design, 2011, 86, 1227-1231.	1.9	41

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73	Determination of the plasma position for its real-time control in the COMPASS tokamak. Fusion Engineering and Design, 2011, 86, 1120-1124.	1.9	13
74	The effect of plasma fluctuations on parallel transport parameters in the SOL. Journal of Nuclear Materials, 2011, 415, S471-S474.	2.7	15
75	Latest investigations on fluctuations, ELM filaments and turbulent transport in the SOL of ASDEX Upgrade. Nuclear Fusion, 2011, 51, 073023.	3.5	59
76	Towards Fast Measurement of the Electron Temperature in the SOL of ASDEX Upgrade Using Swept Langmuir Probes. Contributions To Plasma Physics, 2010, 50, 847-853.	1.1	21
77	Ball-Pen Probe Measurements in L-Mode and H-Mode on ASDEX Upgrade. Contributions To Plasma Physics, 2010, 50, 854-859.	1.1	24
78	Interpretation of fast measurements of plasma potential, temperature and density in SOL of ASDEX Upgrade. Nuclear Fusion, 2010, 50, 105001.	3.5	48
79	Landau Damping Of The LH Grill Spectrum By Tokamak Edge Electrons. , 2009, , .		3
80	ELM induced divertor heat loads on TCV. Journal of Nuclear Materials, 2009, 390-391, 801-805.	2.7	7
81	Direct measurements of the plasma potential in ELMy H-mode plasma with ball-pen probes on ASDEX Upgrade tokamak. Journal of Nuclear Materials, 2009, 390-391, 1114-1117.	2.7	30
82	Measurement of sheared flows in the edge plasma of the CASTOR tokamak. Plasma Physics Reports, 2009, 35, 980-986.	0.9	4
83	Discrepancy between modelled and measured radial electric fields in the scrape-off layer of divertor tokamaks: a challenge for 2D fluid codes?. Nuclear Fusion, 2007, 47, 479-489.	3.5	38
84	Dissipative processes in interchange driven scrape-off layer turbulence. Nuclear Fusion, 2007, 47, 417-433.	3.5	83
85	Fluctuations and transport in the TCV scrape-off layer. Nuclear Fusion, 2007, 47, 667-676.	3.5	147
86	Statistical properties of electrostatic turbulence in toroidal magnetized plasmas. Plasma Physics and Controlled Fusion, 2007, 49, B281-B290.	2.1	33
87	Joint experiments on small tokamaks: edge plasma studies on CASTOR. Nuclear Fusion, 2007, 47, 378-386.	3.5	15
88	Collisionality dependent transport in TCV SOL plasmas. Plasma Physics and Controlled Fusion, 2007, 49, B47-B57.	2.1	76
89	Advanced probes for edge plasma diagnostics on the CASTOR tokamak. Journal of Physics: Conference Series, 2007, 63, 012001.	0.4	22
90	Parallel SOL flow on TCV. Journal of Nuclear Materials, 2007, 363-365, 505-510.	2.7	59

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91	Radiation distributions in TCV. Journal of Nuclear Materials, 2007, 363-365, 1104-1109.	2.7	7
92	SOLPS5 modelling of the type III ELMing H-mode on TCV. Journal of Nuclear Materials, 2007, 363-365, 1037-1043.	2.7	11
93	Turbulent transport in the TCV SOL. Journal of Nuclear Materials, 2007, 363-365, 575-580.	2.7	64
94	Sheath heat transmission factors on TCV. Journal of Nuclear Materials, 2007, 363-365, 382-388.	2.7	27
95	Interchange turbulence in the TCV scrape-off layer. Plasma Physics and Controlled Fusion, 2006, 48, L1-L10.	2.1	135
96	Self-similar density turbulence in the TCV tokamak scrape-off layer. Plasma Physics and Controlled Fusion, 2005, 47, L1-L9.	2.1	108
97	Isotope effects in vibrational excitation and dissociative electron attachment of DCI and DBr. European Physical Journal D, 2005, 35, 225-230.	1.3	8
98	Overview of edge electrostatic turbulence experiments on TCV. European Physical Journal D, 2005, 55, 271-283.	0.4	28
99	Material erosion and migration in tokamaks. Plasma Physics and Controlled Fusion, 2005, 47, B303-B322.	2.1	105
100	Safety factor profile requirements for electron ITB formation in TCV. Plasma Physics and Controlled Fusion, 2005, 47, B107-B120.	2.1	22
101	The influence of molecular dynamics on divertor detachment in TCV. Contributions To Plasma Physics, 2004, 44, 268-273.	1.1	14
102	Predicted effects of parallel temperature gradients on the overestimation of TCV divertor target Langmuir probe Te measurements. Journal of Nuclear Materials, 2003, 313-316, 931-935.	2.7	25
103	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
104	ELM driven divertor target currents on TCV. Nuclear Fusion, 2003, 43, 1145-1166.	3.5	56
105	An overview of results from the TCV tokamak. Nuclear Fusion, 2003, 43, 1619-1631.	3.5	25
106	Recent results from the electron cyclotron heated plasmas in Tokamak $\tilde{A}$ Configuration Variable (TCV). Physics of Plasmas, 2003, 10, 1796-1802.	1.9	26
107	Accessibility and properties of ELMy H-mode and ITB plasmas in TCV. Plasma Physics and Controlled Fusion, 2003, 45, A351-A365.	2.1	13
108	ECH physics and new operational regimes on TCV. Plasma Physics and Controlled Fusion, 2002, 44, B85-B97.	2.1	5

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109	Dissociative attachment of low-energy electrons to vibrationally excited hydrogen molecules. European Physical Journal D, 2002, 52, 29-40.	0.4	4
110	Use of wavelets in potential scattering problems. European Physical Journal D, 2002, 52, 41-50.	0.4	1
111	Title is missing!. European Physical Journal D, 2002, 52, 1057-1070.	0.4	18
112	Divertor geometry effects on detachment in TCV. Journal of Nuclear Materials, 2001, 290-293, 940-946.	2.7	50
113	Title is missing!. European Physical Journal D, 2001, 51, 1107-1117.	0.4	5
114	Title is missing!. European Physical Journal D, 2001, 51, 1001-1010.	0.4	24
115	Edge flow measurements with Gundestrup probes. Physics of Plasmas, 2001, 8, 1995-2001.	1.9	55
116	Self-Organized Criticality paradigm. European Physical Journal D, 2000, 50, 42-46.	0.4	0
117	Inelastic low-energy electron collisions with hydrogen halides. AIP Conference Proceedings, 2000, , .	0.4	0
118	Magnetic and electrostatic fluctuations in the CASTOR tokamak. Plasma Physics and Controlled Fusion, 1999, 41, A577-A585.	2.1	32
119	Generalization of the nonlocal resonance model for low-energy electron collisions with hydrogen halides: the variable threshold exponent. Theoretical Chemistry Accounts, 1998, 100, 31-35.	1.4	17
120	Threshold peak structures in the vibrational excitation of HCl by low-energy electron impact. European Physical Journal D, 1997, 47, 305-315.	0.4	1
121	Electron attachment and vibrational excitation in hydrogen iodide: calculations based on the nonlocal resonance model. Zeitschrift für Physik D-Atoms Molecules and Clusters, 1997, 42, 181-185.	1.0	24
122	Resonances in low-energy rare-gas atom scattering. European Physical Journal D, 1996, 46, 55-65.	0.4	2
123	Method of acceleration for iterative solution of scattering equations with local or nonlocal potential. European Physical Journal D, 1984, 34, 1-14.	0.4	1
124	Space-charge limitation of secondary electron emission. European Physical Journal D, 1978, 28, 1246-1259.	0.4	0
125	On the applicability of three and four parameter fits for analysis of swept embedded Langmuir probes in magnetised plasma. Nuclear Fusion, 0, , .	3.5	3