Physics basis for the first ITER tungsten divertor

Nuclear Materials and Energy
20, 100696
DOI: 10.1016/j.nme.2019.100696

Citation Report

#	Article	IF	Citations
1	A study of planar toroidalâ€“poloidal beveling of monoblocks on the ITER divertor outer vertical target. Nuclear Fusion, 2019, 59, 126043.	1.6	7
2	Multifractal analysis of plasma irradiated tungsten alloy samples. AIP Conference Proceedings, 2019, , .	0.3	2
3	Bolometer developments in diagnostics for magnetic confinement fusion. Journal of Instrumentation, 2019, 14, C10004-C10004.	0.5	14
4	Simulations of tokamak boundary plasma turbulence transport in setting the divertor heat flux width. Nuclear Fusion, 2019, 59, 126039.	1.6	43
5	Assessment of critical heat flux margins on tungsten monoblocks of the ITER divertor vertical targets. Fusion Engineering and Design, 2019, 146, 2036-2039.	1.0	24
6	Simulation studies of divertor power exhaust with neon seeding for CFETR with GW-level fusion power. Physics of Plasmas, 2020, 27, .	0.7	19
7	Mechanisms of crack generation in high-pure tungsten exposed to high power density plasma. Nuclear Instruments & Methods in Physics Research B, 2020, 481, 6-11.	0.6	4
8	Detachment in Fusion Plasmas with Symmetry Breaking Magnetic Perturbation Fields. Physical Review Letters, 2020, 125, 155001.	2.9	16
9	On the transport of edge localized mode filaments in the tokamak scrape-off layer. Nuclear Fusion, 2020, 60, 096014.	1.6	18
10	The role of hydrogen molecular effects on detachment in Magnum-PSI. Physics of Plasmas, 2020, 27, .	0.7	16
11	Highly depth-resolved characterization of fusion-related tungsten material based on picosecond laser-induced breakdown spectroscopy. Journal of Analytical Atomic Spectrometry, 2020, 35, 2867-2879.	1.6	14
12	Parametric study of hydrogenic inventory in the ITER divertor based on machine learning. Scientific Reports, 2020, 10, 17798.	1.6	11
13	Reduction of blob-filament radial propagation by parallel variation of flows: Analysis of a gyrokinetic simulation. Physics of Plasmas, 2020, 27, .	0.7	5
14	Noise limits on ITER plasma vertical stabilization system imposed by tungsten divertor monoblock thermal fatigue. Fusion Engineering and Design, 2020, 161, 111861.	1.0	0
15	Numerical analyses of impurity behaviors for CFETR advanced scenarios by core-edge integrated simulations. Fusion Engineering and Design, 2020, 158, 111865.	1.0	0
16	Derivation of the friction and thermal force for SOLPS-ITER multicomponent plasma modeling. Physics of Plasmas, 2020, 27, .	0.7	8
17	Characterization on the melting failure of CuCrZr cooling tube of W/Cu monoblocks during plasma operations in EAST. Nuclear Materials and Energy, 2020, 25, 100847.	0.6	6
18	High-heat flux tests of tungsten divertor mock-ups with steady-state plasma and e-beam. Nuclear Materials and Energy, 2020, 25, 100816.	0.6	6

#	Article	IF	Citations
19	Divertor heat flux challenge and mitigation in SPARC. Journal of Plasma Physics, 2020, 86, .	0.7	40
20	Self-sustained divertor oscillations in ASDEX Upgrade. Nuclear Fusion, 2020, 60, 076013.	1.6	7
21	First Evidence of Local <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi mathvariant="bold">E</mml:mi><mml:mo>Ã—</mml:mo><mml:mi mathvariant="bold">B</mml:mi></mml:math> Drift in the Divertor Influencing the Structure and Stability of Confined Plasma near the Edge of Fusion Devices. Physical Review Letters, 2020, 124, 195002.	2.9	20
22	Assessment of alternative divertor configurations as an exhaust solution for DEMO. Nuclear Fusion, 2020, 60, 066030.	1.6	41
23	A simple analytic model of impurity leakage from the divertor and accumulation in the main scrape-off layer. Nuclear Fusion, 2020, 60, 106005.	1.6	25
24	Three mechanisms of hydrogen-induced dislocation pinning in tungsten. Nuclear Fusion, 2020, 60, 086015.	1.6	12
25	Fusion Materials Development at Forschungszentrum JÃ¼lich. Advanced Engineering Materials, 2020, 22, 1901376.	1.6	16
26	Helium retention in tungsten under plasma and ion beam irradiation and its impact on surface morphology. Physica Scripta, 2020, T171, 014017.	1.2	16
27	Time-dependent modeling of coupled plasma-wall dynamics. Physics of Plasmas, 2020, 27, 032503.	0.7	3
28	Shielding of liquid metal targets in plasma of linear devices. Physics of Plasmas, 2020, 27, .	0.7	6
29	Temperature dependence of deuterium retention at displacement damage in tungsten. Physica Scripta, 2020, T171, 014012.	1.2	2
30	Simulations of Ar seeding by SOLPS-ITER for a slot-type divertor concept. Physics of Plasmas, 2020, 27, 062509.	0.7	10
31	First Monteâ€Carlo modelling of global beryllium migration in ITER using ERO2.0. Contributions To Plasma Physics, 2020, 60, e201900149.	0.5	17
32	Interpretation of Lyman opacity measurements in JET with the ITER-like wall using a particle balance approach. Plasma Physics and Controlled Fusion, 2020, 62, 065006.	0.9	22
33	SOLPS-ITER modelling of ITER edge plasma with drifts and currents. Nuclear Fusion, 2020, 60, 046019.	1.6	59
34	Simulations of divertor heat flux width using transport code with cross-field drifts under the BOUT++ framework. AIP Advances, 2020, 10, .	0.6	14
35	Fracture behavior of tungsten-based composites exposed to steady-state/transient hydrogen plasma. Nuclear Fusion, 2020, 60, 046029.	1.6	13
36	The erosion of tungsten divertor on EAST during neon impurity seeding in different divertor operation regimes. Plasma Physics and Controlled Fusion, 2020, 62, 055015.	0.9	16

#	Article	IF	Citations
37	High Heat Flux Testing of Castellated Graphite Plasma- Facing Components. Fusion Science and Technology, 2021, 77, 9-18.	0.6	0
38	Recrystallization behaviour of high-flux hydrogen plasma exposed tungsten. Journal of Nuclear Materials, 2021, 545, 152748.	1.3	14
39	Studies on the near-surface trapping of deuterium in implantation experiments. Nuclear Fusion, 2021, 61, 036007.	1.6	2
40	Initial TCV operation with a baffled divertor. Nuclear Fusion, 2021, 61, 024002.	1.6	31
41	The MEMOS-U code description of macroscopic melt dynamics in fusion devices. Plasma Physics and Controlled Fusion, 2021, 63, 035021.	0.9	20
42	Potential design problems for ITER fusion device. Scientific Reports, 2021, 11, 2069.	1.6	12
43	Fusionâ€"Reactor Materials. , 2021, , 594-619.		0
44	Power exhaust by core radiation at COMPASS tokamak. Nuclear Fusion, 2021, 61, 036016.	1.6	6
45	Real-time feedback control of the impurity emission front in tokamak divertor plasmas. Nature Communications, 2021, 12, 1105.	5.8	28
46	Tungsten divertor plasma simulation with bundled charge state model by SOLPS-ITER on EAST. AIP Advances, 2021, 11, 025233.	0.6	7
47	Modeling the vapor shielding of a liquid lithium divertor target using SOLPS 4.3 code. Nuclear Fusion, 2021, 61, 034001.	1.6	11
48	Approaching detachment in I-modeâ€"response of core confinement and the edge pedestal in the ASDEX Upgrade tokamak. Nuclear Fusion, 2021, 61, 036026.	1.6	5
49	The impact of ELM mitigation on tungsten source in the EAST divertor. Nuclear Fusion, 2021, 61, 046046.	1.6	4
50	Additive manufacturing of tungsten using directed energy deposition for potential nuclear fusion application. Surface and Coatings Technology, 2021, 409, 126884.	2.2	27
51	Optimized design of a tungstenâ€"copper functionally graded material monoblock for minimal von Mises stress meeting the material operational temperature window. Nuclear Fusion, 2021, 61, 046050.	1.6	4
52	Comparison between SOLPS-4.3 and the Lengyel Model for ITER baseline neon-seeded plasmas. Nuclear Fusion, 2021, 61, 046029.	1.6	8
53	Recent Progress in Modeling of CFETR Plasma Profiles from Core to Edge. Journal of Fusion Energy, 2021, 40, 1.	0.5	6
54	Divertor power load predictions based on machine learning. Nuclear Fusion, 2021, 61, 046023.	1.6	0

#	Article	IF	Citations
55	Integration of full divertor detachment with improved core confinement for tokamak fusion plasmas. Nature Communications, 2021, 12, 1365.	5.8	50
56	First mirror erosionâ€“deposition studies in JET using an ITER-like mirror test assembly. Nuclear Fusion, 2021, 61, 046022.	1.6	13
57	Recrystallization-mediated crack initiation in tungsten under simultaneous high-flux hydrogen plasma loads and high-cycle transient heating. Nuclear Fusion, 2021, 61, 046018.	1.6	14
58	Computer Tomography on Divertor Impurity Monitor for ITER with Minimizing Errors in a Logarithmic Scale. Plasma and Fusion Research, 2021, 16, 2405019-2405019.	0.3	7
59	Scoping the characteristics and benefits of a connected double-null configuration for power exhaust in EU-DEMO. Nuclear Materials and Energy, 2021, 26, 100886.	0.6	6
60	Design of EAST lower divertor by considering target erosion and tungsten ion transport during the external impurity seeding. Nuclear Fusion, 2021, 61, 066004.	1.6	17
61	Impact of neutron irradiation on hardening of baseline and advanced tungsten grades and its link to initial microstructure. Nuclear Fusion, 2021, 61, 066012.	1.6	10
62	First evidence of dominant influence of E Ã— B drifts on plasma cooling in an advanced slot divertor for tokamak power exhaust. Nuclear Fusion, 2021, 61, 054002.	1.6	15
63	Impact of three-dimensional magnetic perturbations on turbulence in tokamak edge plasmas. Plasma Physics and Controlled Fusion, 2021, 63, 055017.	0.9	1
64	Approaching the radiating X-point in SOLPS-ITER modeling of ASDEX Upgrade H-mode discharges. Plasma Physics and Controlled Fusion, 2021, 63, 055011.	0.9	13
65	Comparison of divertor behavior and plasma confinement between argon and neon seeding in EAST. Nuclear Fusion, 2021, 61, 066013.	1.6	23
66	Study on pulse shape dependence of tungsten mass erosion under disruption-like heat load. Fusion Engineering and Design, 2021, 165, 112209.	1.0	1
67	Progress of Divertor Heat and Particle Flux Control in EAST for Advanced Steady-State Operation in the Last 10 Years. Journal of Fusion Energy, 2021, 40, 1.	0.5	9
68	Evaluation of silicon carbide as a divertor armor material in DIII-D H-mode discharges. Nuclear Fusion, 2021, 61, 066005.	1.6	16
69	EXPERIMENTS ON DESORPTION OF ATMOSPHERIC GASES FROM GRAPHITE ELEMENTS OF THE KTM TOKAMAK'S FIRST WALL. Vestnik NÃ‚C RK, 2021, , 40-47.	0.1	1
70	The EU strategy for solving the DEMO exhaust problem. Fusion Engineering and Design, 2021, 166, 112307.	1.0	11
71	Type-I ELM power loads on the closed outer divertor targets in the HL-2A tokamak. Nuclear Fusion, 2021, 61, 066024.	1.6	9
72	Observation of fully detached divertor integrated with improved core confinement for tokamak fusion plasmas. Physics of Plasmas, 2021, 28, .	0.7	9

#	Article	IF	Citations
73	The operational space for divertor power exhaust in DEMO with a super-X divertor. Nuclear Fusion, 2021, 61, 076007.	1.6	7
74	Real-time feedback system for divertor heat flux control at COMPASS tokamak. Plasma Physics and Controlled Fusion, 2021, 63, 065012.	0.9	8
75	Experimental study of the influence of gas puff locations on H-mode boundary plasmas with argon seeding on EAST. Plasma Physics and Controlled Fusion, 2021, 63, 085001.	0.9	4
76	Power deposition behavior of high-density transient hydrogen plasma on tungsten in Magnum-PSI. Plasma Physics and Controlled Fusion, 2021, 63, 085016.	0.9	4
77	Simulation of tungsten target erosion and tungsten impurity transport during argon seeding on EAST. Plasma Physics and Controlled Fusion, 2021, 63, 085002.	0.9	8
78	Conceptual design of a collimated neutron flux monitor and spectrometer for DTT. Fusion Engineering and Design, 2021, 167, 112382.	1.0	2
79	Vibrational excitation and dissociation of deuterium molecule by electron impact. Plasma Physics and Controlled Fusion, 2021, 63, 085006.	0.9	12
80	Thermalized collisional pre-sheath detected in dense plasma with coherent and incoherent Thomson scattering. Nuclear Fusion, 2021, 61, 096007.	1.6	2
81	Kinetic-fluid coupling simulations of ITER Type I ELM. Fusion Engineering and Design, 2021, 168, 112407.	1.0	2
82	RF wave coupling, plasma heating and characterization of induced plasma-material interactions in WEST L-mode discharges. Nuclear Fusion, 2021, 61, 086027.	1.6	8
83	ELM and inter-ELM heat and particle flux to a secondary divertor in the DIII-D tokamak. Nuclear Fusion, 2021, 61, 086024.	1.6	4
84	Modelling Fast Response Surface Thermocouple for Plasma Facing Components. IEEE Sensors Journal, 2021, 21, 17898-17905.	2.4	2
85	Predictive modelling of liquid metal divertor: from COMPASS tokamak towards Upgrade. Physica Scripta, 2021, 96, 124013.	1.2	11
86	Progress from ASDEX Upgrade experiments in preparing the physics basis of ITER operation and DEMO scenario development. Nuclear Fusion, 2022, 62, 042006.	1.6	15
87	The MEMOS-U macroscopic melt dynamics codeâ€"benchmarking and applications. Physica Scripta, 2021, 96, 124009.	1.2	9
88	Acceptance tests of the industrial series manufacturing of WEST ITER-like tungsten actively cooled divertor. Physica Scripta, 2021, 96, 124029.	1.2	10
89	The role of plasma-molecule interactions on power and particle balance during detachment on the TCV tokamak. Nuclear Fusion, 2021, 61, 106014.	1.6	22
90	Irradiation-induced hardening in fusion relevant tungsten grades with different initial microstructures. Physica Scripta, 2021, 96, 124021.	1.2	3

#	Article	IF	Citations
91	Modelling of hydrogen isotopes trapping, diffusion and permeation in divertor monoblocks under ITER-like conditions. Nuclear Fusion, 2021, 61, 126003.	1.6	9
92	Combined high fluence and high cycle number transient loading of ITER-like monoblocks in Magnum-PSI. Nuclear Fusion, 2021, 61, 116045.	1.6	9
93	Interpretation of the hydrogen isotope effect on the density limit in JET-ILW L-mode plasmas using EDGE2D-EIRENE. Physica Scripta, 2021, 96, 124028.	1.2	0
94	Advances in the long-pulse steady-state high beta H-mode scenario with active controls of divertor heat and particle fluxes in EAST. Nuclear Fusion, 2022, 62, 042010.	1.6	22
95	Gross and net erosion balance of plasma-facing materials in full-W tokamaks. Nuclear Fusion, 2021, 61, 116006.	1.6	13
96	Pulse Shape Dependence of Vapor Shielding Efficiencies During Transient Heat Loads. Plasma and Fusion Research, 2021, 16, 1405092-1405092.	0.3	1
97	Modeling of particle transport, neutrals and radiation in magnetically-confined plasmas with Aurora. Plasma Physics and Controlled Fusion, 2021, 63, 112001.	0.9	11
98	Fuel retention in WEST and ITER divertors based on FESTIM monoblock simulations. Nuclear Fusion, 2021, 61, 126001.	1.6	9
99	Integrated model predictions on the impact of substrate damage on gas dynamics during ITER burning-plasma operations. Nuclear Fusion, 2021, 61, 116051.	1.6	5
100	SOLPS-ITER modeling of divertor scenarios for EU-DEMO. Nuclear Fusion, 2021, 61, 106013.	1.6	23
101	Assessment of the burning-plasma operational space in ITER by using a control-oriented core-SOL-divertor model. Fusion Engineering and Design, 2021, 171, 112516.	1.0	4
102	Observation of surface deformation of tungsten exposed to single pulsed high heat flux and magnetic field for divertor design. Fusion Engineering and Design, 2021, 171, 112547.	1.0	1
103	Temperature-dependent model of helium bubble expansion and bursting in tungsten. Journal of Nuclear Materials, 2021, 554, 153101.	1.3	5
104	Damage behavior of Nb3Sn/Cu superconducting strand at room temperature under asymmetric strain cycling. Fusion Engineering and Design, 2021, 172, 112869.	1.0	2
105	Conceptual design of a liquid-metal divertor for the European DEMO. Fusion Engineering and Design, 2021, 173, 112812.	1.0	20
106	TALIF measurements of hydrogen and deuterium surface loss probabilities on quartz in low pressure high density plasmas. Plasma Sources Science and Technology, 2021, 30, 015013.	1.3	4
107	Modeling of COMPASS tokamak divertor liquid metal experiments. Nuclear Materials and Energy, 2020, 25, 100860.	0.6	10
108	Divertor detachment with neon seeding in grassy-ELM H-mode in EAST. Plasma Physics and Controlled Fusion, 2020, 62, 095025.	0.9	10

#	Article	IF	Citations
109	Development of a tomographic reconstruction method for axisymmetric D_{Î±} emission profiles in the ITER plasma boundary. Plasma Physics and Controlled Fusion, 2020, 62, 115014.	0.9	11
110	Comparison of high density and nitrogen seeded detachment using SOLPS-ITER simulations of the tokamak Ã¡ configuration variable. Plasma Physics and Controlled Fusion, 2020, 62, 125006.	0.9	19
111	Scaling of L-mode heat flux for ITER and COMPASS-U divertors, based on five tokamaks. Nuclear Fusion, 2020, 60, 066016.	1.6	26
112	First analysis of the misaligned leading edges of ITER-like plasma facing units using a very high resolution infrared camera in WEST. Nuclear Fusion, 2020, 60, 106020.	1.6	18
113	Resolidification-controlled melt dynamics under fast transient tokamak plasma loads. Nuclear Fusion, 2020, 60, 104001.	1.6	30
114	Stable heat and particle flux detachment with efficient particle exhaust in the island divertor of Wendelstein 7-X. Nuclear Fusion, 0, , .	1.6	18
115	Long discharges in a steady state with D₂ and N₂ on the actively cooled tungsten upper divertor in WEST. Nuclear Fusion, 2020, 60, 126046.	1.6	9
116	Developments towards an ELM-free pedestal radiative cooling scenario using noble gas seeding in ASDEX Upgrade. Nuclear Fusion, 2021, 61, 016002.	1.6	33
117	Physics and technology considerations for the deuteriumâ€“tritium fuel cycle and conditions for tritium fuel self sufficiency. Nuclear Fusion, 2021, 61, 013001.	1.6	60
118	Assessment of ITER divertor performance during early operation phases. Nuclear Fusion, 2021, 61, 016021.	1.6	25
119	The role of divertor pumping in plasma detachment and particle exhaust in a closed divertor. Nuclear Fusion, 2021, 61, 016022.	1.6	13
120	X-point radiation, its control and an ELM suppressed radiating regime at the ASDEX Upgrade tokamak. Nuclear Fusion, 2021, 61, 024001.	1.6	59
121	Deuterium Retention in a Nanostructured Tungsten Surface Layer Formed during High-Temperature Irradiation with Helium Plasma. Journal of Surface Investigation, 2020, 14, 1248-1253.	0.1	4
122	Volumetric recombination in EMC3-EIRENE: Implementation and first application to the pre-fusion power operation phase in ITER. Physics of Plasmas, 2021, 28, 102503.	0.7	4
123	Investigation of plasma wall interactions between tungsten plasma facing components and helium plasmas in the WEST tokamak. Nuclear Fusion, 2022, 62, 076028.	1.6	22
124	Contribution of leading edge shape to a damaging of castellated tungsten targets exposed to repetitive QSPA plasma loads. Physica Scripta, 2021, 96, 124043.	1.2	1
125	Development of plasma beam irradiation facility using applied-field MPD thruster to study plasma-surface interactions. Plasma Physics and Controlled Fusion, 2021, 63, 125020.	0.9	3
126	Power exhaust concepts and divertor designs for Japanese and European DEMO fusion reactors. Nuclear Fusion, 2021, 61, 126057.	1.6	14

#	Article	IF	Citations
127	Divertor detachment in the pre-fusion power operation phase in ITER during application of resonant magnetic perturbations. Nuclear Fusion, 2021, 61, 126027.	1.6	6
128	DEUTERIUM TRAPPING AND SPUTTERING OF TUNGSTEN COATINGS EXPOSED TO LOW-ENERGY DEUTERIUM PLASMA. , 2020, , 54-59.		2
129	The role of tungsten chemical state and boron on ammonia formation using N2-H2 radiofrequency discharges. Nuclear Fusion, 0, , .	1.6	3
130	Development of an integrated coreâ€“edge scenario using the super H-mode. Nuclear Fusion, 2021, 61, 126064.	1.6	2
131	Computational Modeling of the Edge Plasma Transport Phenomena. Springer Series in Plasma Science and Technology, 2020, , 201-227.	0.1	0
132	Detachment in conventional and advanced double-null plasmas in TCV. Nuclear Fusion, 2021, 61, 116064.	1.6	1
133	Physics designÂof new lower tungsten divertor for long-pulse high-power operations in EAST. Nuclear Fusion, 2021, 61, 126070.	1.6	40
134	Multi-machine SOLPS-ITER comparison of impurity seeded H-mode radiative divertor regimes with metal walls. Nuclear Fusion, 2021, 61, 126073.	1.6	20
135	Sustained W-melting experiments on actively cooled ITER-like plasma facing unit in WEST. Physica Scripta, 2021, 96, 124057.	1.2	19
136	Deuterium retention in mixed Be-W-D codeposited layers. Nuclear Fusion, 2020, 60, 126005.	1.6	5
137	Fluid turbulence simulations of divertor heat load for ITER hybrid scenario using BOUT++. Nuclear Fusion, 2022, 62, 026024.	1.6	4
138	Design and physics basis for the upcoming DIII-D SAS-VW campaign to quantify tungsten leakage and transport in a new slot divertor geometry. Physica Scripta, 2021, 96, 124073.	1.2	16
139	Typology of defects in DEMO divertor target mockups. Physica Scripta, 2021, 96, 124065.	1.2	2
140	Fusion pilot plant performance and the role of a sustained high power density tokamak. Nuclear Fusion, 2022, 62, 036026.	1.6	13
141	Validation of edge turbulence codes in a magnetic X-point scenario in TORPEX. Physics of Plasmas, 2022, 29, .	0.7	11
142	A Method of Controlling a Rate of an Energy Input into a Target Surface Using a Submillisecond Electron Beam. , 2020, , .		3
143	Role of E Ã— B drift in double-peak density distribution for the new lower tungsten divertor with unfavorable B _t on EAST. Nuclear Fusion, 2022, 62, 056005.	1.6	8
144	Detached regime with highly radiating Xâ€point: Physics and modelling. Contributions To Plasma Physics, 2022, 62, .	0.5	8

#	Article	IF	Citations
145	A Software Package for Plasma-Facing Component Analysis and Design: The Heat Flux Engineering Analysis Toolkit (HEAT). Fusion Science and Technology, 2022, 78, 10-27.	0.6	10
146	Beryllium erosion and redeposition in ITER H, He and Dâ€“T discharges. Nuclear Fusion, 2022, 62, 036011.	1.6	13
147	Impact of edge harmonic oscillations on the divertor heat flux in NSTX. Physics of Plasmas, 2022, 29, 012503.	0.7	1
148	Fluid, kinetic and hybrid approaches for neutral and trace ion edge transport modelling in fusion devices. Nuclear Fusion, 2022, 62, 086051.	1.6	13
149	Experimental study on the role of the target electron temperature as a key parameter linking recycling to plasma performance in JET-ILW*. Nuclear Fusion, 2022, 62, 066030.	1.6	11
150	Simulations of fusion edge plasmas by linear plasma devices: physics and plasmaâ€“material interactions. Journal of the Korean Physical Society, 0, , 1.	0.3	0
151	SOLPS-ITER simulations of high power exhaust for CFETR divertor with full drifts. Nuclear Fusion, 2022, 62, 026031.	1.6	6
152	Developing solid-surface plasma facing components for pilot plants and reactors with replenishable wall claddings and continuous surface conditioning. Part A: concepts and questions. Plasma Physics and Controlled Fusion, 2022, 64, 055018.	0.9	6
153	In situ leading-edge-induced damages of melting and cracking W/Cu monoblocks as divertor target during long-term operations in EAST. Nuclear Fusion, 2022, 62, 056004.	1.6	8
154	A generalised formulation of G-continuous Bezier elements applied to non-linear MHD simulations. Journal of Computational Physics, 2022, 464, 111101.	1.9	4
155	Full-f electromagnetic gyrokinetic turbulence simulations of the edge and scrape-off layer of ASDEX Upgrade with GENE-X. Physics of Plasmas, 2022, 29, .	0.7	11
156	<scp>SOLEDGE3X</scp> full vessel plasma simulations for computation of <scp>ITER</scp> firstâ€wall fluxes. Contributions To Plasma Physics, 2022, 62, .	0.5	2
157	Developing solid-surface plasma facing components for pilot plants and reactors with replenishable wall claddings and continuous surface conditioning. Part B: required research in present tokamaks. Plasma Physics and Controlled Fusion, 2022, 64, 055003.	0.9	0
158	Overview of the TCV tokamak experimental programme. Nuclear Fusion, 2022, 62, 042018.	1.6	30
159	<scp>Influence</scp> of the drifts on the doubleâ€peaked emission profile of the visible light in the upper divertor region of <scp>EAST</scp>. Contributions To Plasma Physics, 2022, 62, .	0.5	3
160	First plasma exposure of a pre-damaged ITER-like plasma-facing unit in the WEST tokamak: procedure for the PFU preparation and lessons learned. Nuclear Fusion, 2022, 62, 056010.	1.6	5
161	Integrated design strategy for EU-DEMO first wall protection from plasma transients. Fusion Engineering and Design, 2022, 177, 113067.	1.0	21
162	Systematic extraction of a control-oriented model from perturbative experiments and SOLPS-ITER for emission front control in TCV. Nuclear Fusion, 2022, 62, 066025.	1.6	9

#	Article	IF	Citations
163	Analysis of trapping sites for deuterium in Wâ€“Crâ€“Y SMART alloy. Vacuum, 2022, 199, 110956.	1.6	3
164	Plasma-Facing Components of the TRT Tokamak. Plasma Physics Reports, 2021, 47, 1220-1237.	0.3	13
165	Achievements of actively controlled divertor detachment compatible with sustained high confinement core in DIII-D and EAST. Nuclear Fusion, 2022, 62, 076002.	1.6	9
166	Performance of the Conventional Divertor in TRT. Plasma Physics Reports, 2021, 47, 1238-1244.	0.3	6
167	Structured large-pore foams improve thermal performance of LiMIT-style liquid lithium PFC. Nuclear Fusion, 2022, 62, 016018.	1.6	1
168	Microchannel cooling technique for dissipating high heat flux on W/Cu flat-type mock-up for EAST divertor. Plasma Science and Technology, 2022, 24, 095602.	0.7	3
169	Simulation of Liquid Lithium Divertor Geometry Using SOLPS-ITER. IEEE Transactions on Plasma Science, 2022, , 1-7.	0.6	6
170	Application of High-Frequency Ultrasonic Test to the Non-Destructive Inspection of W-Cu Bonded Interface. Plasma and Fusion Research, 2022, 17, 2405013-2405013.	0.3	2
171	Development and Application of SONIC Divertor Simulation Code to Power Exhaust Design of Japanese DEMO Divertor. Processes, 2022, 10, 872.	1.3	2
172	Influence of porosity and blistering on the thermal fatigue behavior of tungsten. Nuclear Fusion, 2022, 62, 076039.	1.6	3
173	Quantifying heat and particle flux to primary and secondary divertors for various types of edge-localized-modes. Physics of Plasmas, 2022, 29, .	0.7	4
174	Enhancement of detachment control with simplified real-time modelling on the KSTAR tokamak. Plasma Physics and Controlled Fusion, 2022, 64, 075002.	0.9	7
175	Divertor plasma behaviors with neon seeding at different locations on EAST with ITER-like divertor. Nuclear Fusion, 2022, 62, 086027.	1.6	6
176	Assessment of advanced fluid neutral models for the neutral atoms in the plasma edge and application in ITER geometry. Nuclear Fusion, 2022, 62, 086023.	1.6	7
177	A spectroscopic inference and SOLPS-ITER comparison of flux-resolved edge plasma parameters in detachment experiments on TCV. Nuclear Fusion, 2022, 62, 096012.	1.6	10
178	SOLPS-ITER modeling of CFETR advanced divertor with Ar and Ne seeding. Nuclear Fusion, 2022, 62, 096010.	1.6	8
179	A Method to Identify the Heat Flux From Photons and Neutrals at the Divertor Target. IEEE Transactions on Plasma Science, 2022, 50, 4257-4261.	0.6	1
180	Comparison between MAST-U conventional and Super-X configurations through SOLPS-ITER modelling. Nuclear Fusion, 2022, 62, 096026.	1.6	7

#	Article	IF	Citations
181	Recovery and recrystallization of warm-rolled tungsten during helium thermal desorption spectroscopy annealing. Journal of Nuclear Materials, 2022, , 153914.	1.3	0
182	Thermodynamic and Kinetic Parameters of the Processes of Deuterium Interaction with Tungsten Protective Coatings. East European Journal of Physics, 2021, , 99-106.	0.1	1
183	Argon doped pellets for fast and efficient radiative power removal in ASDEX Upgrade. Nuclear Fusion, 2022, 62, 106013.	1.6	4
184	X-point and divertor filament dynamics from gas puff imaging on TCV. Nuclear Fusion, 2022, 62, 106022.	1.6	10
185	Modeling of the effects of impurity seeding on plasma detachment and impurity screening of snowflake divertor on HL-2M tokamak by SOLPS-ITER. Nuclear Fusion, 2022, 62, 106006.	1.6	2
186	Characterizing W sources in the all-W wall, all-RF WEST tokamak environment^{[*] , ^{**}}. Plasma Physics and Controlled Fusion, 2022, 64, 104008.	0.9	5
187	Dependence of scrape-off layer profiles and turbulence on gas fuelling in high density H-mode regimes in TCV. Nuclear Fusion, 2022, 62, 096031.	1.6	5
188	3D ion gyro-orbit heat load predictions for NSTX-U. Nuclear Fusion, 2022, 62, 106020.	1.6	1
189	High gas throughput SOLPS-ITER simulations extending the ITER database to strong detachment. Nuclear Fusion, 2022, 62, 106017.	1.6	5
190	Predicting tungsten erosion and leakage properties for the new V-shaped small angle slot divertor in DIII-D. Nuclear Fusion, 2022, 62, 106024.	1.6	4
191	Improved heat and particle flux mitigation in high core confinement, baffled, alternative divertor configurations in the TCV tokamak. Nuclear Fusion, 2022, 62, 126035.	1.6	3
192	Preliminary exploration of a WTaVTiCr high-entropy alloy as a plasma-facing material. Nuclear Fusion, 2022, 62, 126002.	1.6	2
193	Simulation of lithium flow, redeposition, and vapor shielding in liquid lithium divertor of T-15MD tokamak with SOLPS 4.3 code. Plasma Physics and Controlled Fusion, 2022, 64, 115006.	0.9	4
194	E Ã— B flow driven electron temperature bifurcation in a closed slot divertor with ion B Ã— âˆ‡B away from the X-point in the DIII-D tokamak. Nuclear Fusion, 2022, 62, 126048.	1.6	1
195	Effect of the divertor configuration on the JET edge radial electric field. Nuclear Fusion, 2022, 62, 126057.	1.6	4
196	Modelling of tungsten impurity edge transport and screening for different divertor conditions in EAST. Nuclear Fusion, 2022, 62, 126018.	1.6	6
197	EDGE2D-EIRENE and ERO2.0 predictions of nitrogen molecular break-up and transport in the divertor of JET low-confinement mode plasmas. Nuclear Materials and Energy, 2022, 33, 101273.	0.6	0
198	Combined Thomson Scattering and Laser-Induced Fluorescence for Studying Divertor and X-point Plasmas in Tokamak with Reactor Technologies. Plasma Physics Reports, 2022, 48, 866-874.	0.3	4

#	Article	IF	Citations
199	Erosion of Fuzz Layers Formed in Steady-State Plasma Discharge. Fusion Science and Technology, 2023, 79, 407-412.	0.6	0
200	A reduced model for the ITER divertor based on SOLPS solutions for ITER Q = 10 baseline conditions: B. A reduced model based on reversed-direction two point modeling [*]. Nuclear Fusion, 2023, 63, 016017.	1.6	1
201	Novel concept suppressing plasma heat pulses in a tokamak by fast divertor sweeping. Scientific Reports, 2022, 12, .	1.6	1
202	Divertor detachment of high Î² _N H-mode discharges with the HL-2A closed divertor geometry. Physica Scripta, 2022, 97, 115604.	1.2	1
203	Fascinating physics at the edge of magnetic fusion devices. Plasma Physics and Controlled Fusion, 2022, 64, 124005.	0.9	1
204	Benchmark of a self-consistent dynamic 1D divertor model DIV1D using the 2D SOLPS-ITER code. Plasma Physics and Controlled Fusion, 2022, 64, 125013.	0.9	2
205	JINTRAC integrated simulations of ITER scenarios including fuelling and divertor power flux control for H, He and DT plasmas. Nuclear Fusion, 2022, 62, 126033.	1.6	3
206	A reduced model for the ITER divertor based on SOLPS solutions for ITER Q = 10 baseline conditions: A. identifying options for the control parameters*. Nuclear Fusion, 2023, 63, 016016.	1.6	2
207	Modeling of the impact of neon seeding on the detachment in EAST by SOLPS-ITER. Physics of Plasmas, 2022, 29, .	0.7	5
208	Radiation and Detachment. Springer Series on Atomic, Optical, and Plasma Physics, 2022, , 313-386.	0.1	0
209	Surface free energy and structural transition of tungsten nanosolid. Journal of Nanoparticle Research, 2022, 24, .	0.8	2
210	ITER relevant multi-emissive sheaths at normal magnetic field inclination. Nuclear Fusion, 2023, 63, 026007.	1.6	4
211	Integrated modelling of neon impact on JET H-mode core plasmas. Nuclear Fusion, 2023, 63, 016019.	1.6	2
212	Power exhaust and core-divertor compatibility of the baffled snowflake divertor in TCV. Plasma Physics and Controlled Fusion, 2023, 65, 035004.	0.9	1
213	Model-based impurity emission front control using deuterium fueling and nitrogen seeding in TCV. Nuclear Fusion, 2023, 63, 026006.	1.6	4
214	Parameter dependencies of the separatrix density in low triangularity L-mode and H-mode JET-ILW plasmas. Nuclear Fusion, 2023, 63, 036019.	1.6	1
215	Compatibility of large ELM control and stable partial detachment with neon/argon seeding in EAST. Nuclear Fusion, 2023, 63, 026025.	1.6	6
216	Implementation of SOLPS-ITER code with new Gradâ€“Zhdanov module for Dâ€“T mixture. Nuclear Fusion, 2023, 63, 026014.	1.6	5

#	Article	IF	Citations
217	Analysis of ion orbits in front of a negative planar electrode immersed in an oblique magnetic field. AIP Advances, 2022, 12, 125211.	0.6	1
218	Progress in the development and understanding of a high poloidal-beta tokamak operating scenario for an attractive fusion pilot plant. Reviews of Modern Plasma Physics, 2023, 7, .	2.2	5
219	Modeling materials under coupled extremes: Enabling better predictions of performance. MRS Bulletin, 2022, 47, 1120-1127.	1.7	4
220	Systems Design Space for Tokamak Physics and Engineering. Springer Series in Plasma Science and Technology, 2022, , 45-86.	0.1	0
221	In situ melting phenomena on W plasma-facing components for lower divertor during long-pulse plasma operations in EAST. Nuclear Fusion, 2023, 63, 036022.	1.6	2
222	Ab-initio investigation of mechanical and fracture-related properties of W-Re Ïƒ and Ï‡ precipitates. Journal of Nuclear Materials, 2023, 577, 154261.	1.3	0
223	The effect of the impurity seeding into the closed divertor on plasma detachment in the HL-2A tokamak. Nuclear Fusion, 0, , .	1.6	2
224	Development of Methods for Determining Near-Surface Plasma Parameters During Tests of Fusion Reactor First-Wall Prototypes Using the PLM Device. Fusion Science and Technology, 2023, 79, 421-431.	0.6	0
225	Calibration and thermal test results of prototype bolometer sensors for ITER fusion reactor. Review of Scientific Instruments, 2023, 94, .	0.6	1
226	Invariant manifold growth formula in cylindrical coordinates and its application for magnetically confined fusion. Plasma Science and Technology, 0, , .	0.7	0
227	Separatrix parameters and core performances across the WEST L-mode database. Nuclear Fusion, 2023, 63, 056021.	1.6	2
228	A molecular dynamics study on the influence of vacancies and interstitial helium on mechanical properties of tungsten. Journal of Nuclear Materials, 2023, 580, 154378.	1.3	2
229	Compression of tokamak boundary plasma simulation data using a maximum volume algorithm for matrix skeleton decomposition. Journal of Computational Physics, 2023, 484, 112089.	1.9	0
230	Novel SOLPS-ITER simulations of X-point target and snowflake divertors. Plasma Physics and Controlled Fusion, 2023, 65, 035011.	0.9	0
231	Diagnostics Complex of the First Wall and Divertor of Tokamak with Reactor Technologies: Control of Erosion and Temperature and Monitoring of Fusion Fuel Build-up. Plasma Physics Reports, 2022, 48, 1389-1403.	0.3	4
232	H-mode experimental integrated modeling of impurity injection to control divertor heat flux on HL-2A. Journal of the Korean Physical Society, 2023, 82, 755-762.	0.3	0
233	An Integrated Design Study for an Advanced Tokamak to Close Physics Gaps in Energy Confinement and Power Exhaust. Fusion Science and Technology, 2023, 79, 320-344.	0.6	2
234	Time-dependent SOLPS-ITER simulations of the tokamak plasma boundary for model predictive control using SINDy [*]. Nuclear Fusion, 2023, 63, 046015.	1.6	4

#	Article	IF	Citations
235	Characterisation of detachment in the MAST-U Super-X divertor using multi-wavelength imaging of 2D atomic and molecular emission processes. Nuclear Fusion, 2023, 63, 056003.	1.6	6
236	MORPHOLOGY AND SPUTTERING OF TUNGSTEN NITRIDES COATINGS EXPOSED TO DEUTERIUM PLASMA. , 2023, , 57-62.		0
237	Investigation of ELM-related Larmor ion flux into toroidal gaps of divertor target plates. Nuclear Fusion, 2023, 63, 066021.	1.6	1
238	MW total heating/current driving power, <i>H</i>₉₈~1.0-1.4, and normalized electron density <i>f_{nG}</i>~0.8-1.0, high-performance long-pulse or fully non-inductive steady-state operation can be achieved, supporting research on the physics of ITER and CFETR steady-state operation modes. In general, improving the plasma confinement performance can achieve fully non-inductive operation at lower heating/driving power while maintaining the same. Wuli Xuebao/Acta Physica Sinica, 2023, .	0.2	0
239	Generalization of Modified SXB Method for Hydrogen to the Case of Isotope Mixture. Plasma Physics Reports, 2023, 49, 179-193.	0.3	0