

# Program Overview

Tuesday		Wednesday		Thursday		Friday	
8:00h	Registration & Welcome	8:00h	Registration Tungsten, tungsten alloys, and steels		Fusion devices and edge plasma physics		Fuel retention
9:00h		Opening (20 min) ITER and W PFC		8:30h		16 Liu	
9:20h	11 de Temmerman	9:00h	17 Linovsky	111 Weckmann	117 Markelj		
9:50h	01 Li	9:30h	06 Wang	010 Rudakov	016 Schwarz-Selinger		
10:15h	Coffee (25min)	9:55h	07 Tistrone	011 Huber	017 Kreter		
	Technology and testing of PFCs	10:20h	Coffee (20min)	Coffee (20min)	Coffee (25min)		
10:40h		12 König	18 Gilbert	112 Silburn	118 Matveev		
11:10h		13 Richou	19 Sakamoto	113 Vyacheslavov	018 Alegre		
11:40h		02 Fursdon	08 Terentyev	012 Wirtz	019 Tabares		
12:05h		03 Fukumoto	09 Manhard	013 Klimov	020 post deadline		
12:30h - 14:10h	Lunch (100Min)	Lunch (100min)	Lunch (100Min)				
	Transients and melting	Outing		Erosion, redeposition, dust, and fuel retention			
14:10h		14 Sieglin	Excursion: Düsseldorf City		114 Masuzaki		
14:40h		15 Krieger	Schloss Dyck		115 Romazanov		
15:10h		04 Coenen	Industriepark Duisburg		014 Heinola		
15:35h		05 Komm			015 Winters		
16:00h - 18:30h	Poster session 1 & Coffee			Poster session 2 & Coffee			
19:30h	Reception at Uerige			Dinner at Rheinterrassen			
22:00h	Düsseldorf (Bus)			Düsseldorf (Bus)			

# Scientific Program

Monday, 15. May 2017

13:00 – 18:30h Registration			
14:00 – 15:50h Tutorial			
14:00h	T1	Sven Wiesen	Plasma-edge and plasma-surface interaction modelling
14:55h	T2	Jochen Linke	Testing of plasma-facing materials and components under operating conditions
15:50 – 16:10h Coffee Break			
16:10 – 18:00h Tutorial			
16:10h	T3	Yoshio Ueda	Plasma-facing materials and engineering of plasma-facing components
17:05h	T4	Marek Rubel	Analysis and diagnosis techniques of plasma-facing materials

Tuesday 16. May 2017

9:00 – 9:20h Opening			
Sebastijan Brezinsek: Chairman of the PFMC conference			
Christian Linsmeier: Director Institute of Energy and Climate Research (IEK-4) Forschungszentrum Jülich			
9:20 – 10:15h Session 1: ITER and W PFCs			
Chair: Jan Willem Coenen			
09:20h	I1	Gregory de Temmerman	Performance of tungsten materials under relevant heat and particle loads in ITER and consequences for material specifications
09:50h	O1	Qiang Li	Development and Application of W/Cu Flat-type Plasma Facing Components at ASIPP
10:15-10:40h Coffee Break			

## Tuesday 16. May 2017

<b>10:40 – 12:30h Session 2: Technology and testing of plasma-facing components</b> Chair: Takeshi Hirai			
10:40h	I2	Ralf König	PFC Design for Wendelstein-7X Island Divertor Operation
11:10h	I3	Marianne Richou	Realization of high heat flux W monoblock type target with graded interlayer for application to DEMO divertor
11:40h	O2	Mike Fursdon	Development and Testing of the Thermal-Break Divertor Monoblock Target Design Delivering 20MW/m <sup>2</sup> Heat Load Capability
12:05h	O3	Masakatsu Fukomoto	Behaviour of mm-thick W coatings on CFC for JT-60SA under high heat fluxes
12:30 – 14:10h Lunch Break (own cost)			
<b>14:10 – 16:00h Session 3: Transients and Melting</b> Chair: Guy Matthews			
14:10h	I4	Bernhard Sieglin	Progress in Extrapolating Divertor Heat Fluxes Towards Large Fusion Devices
14:40h	I5	Karl Krieger	Investigation of transient tungsten melting by ELMs in ASDEX Upgrade
15:10h	O4	Jan Willem Coenen	Transient induced tungsten melting at the Joint European Torus (JET)
15:35h	O5	Michael Komm	Particle-in-cell simulations of thermionic emission from tungsten plasma-facing components under tokamak relevant conditions
16:00 – 18:30h Poster Session 1 and Coffee Break			

19:30 – 22:00h Reception at Uerige Düsseldorf Altstadt

## Wednesday 17. May 2017

<b>08:30 – 10:20h Session 4: Tungsten, tungsten alloys, and steels</b> Chair: Thierry Loarer			
08:30h	I6	Xiang Liu	Improvement of mechanical properties and thermal shock resistance for particle dispersion strengthened W alloys processed by a new plastic deformation
09:00h	I7	Andrey Litnovsky	New Oxidation Resistant Tungsten Alloys for use in the Nuclear Fusion Reactors!
09:30h	O6	Peng Wang	Deuterium Retention and Erosion of CLF-1 Steel Exposed to Deuterium Plasma
09:55h	O7	Emmanuelle Tsitrone	Starting the WEST platform: testing ITER-like divertor target Plasma Facing Units in a tokamak environment
10:20 – 10:40h Coffee Break			
<b>10:40 – 12:30h Session 5: Tungsten: transmutation and surface morphology</b> Chair: Noriyasu Ohno			
10:40h	I8	Mark Gilbert	Spatial dependence of tungsten transmutation in a fusion device
11:10h	I9	Ryuichi Sakamoto	Surface morphology and tritium trapping in tungsten and RAFM steel exposed to helium plasma in PSI-2
11:40h	O8	Dmitry Terentyev	Recent progress in the understanding of high flux plasma impact on surface microstructure of commercial grade and single crystal pure tungsten
12:05h	O9	Armin Manhard	Blistering and D retention of rough and technical tungsten surfaces
12:30 – 14:10h Lunch Break (own cost)			

14:30 – 17:30h Outing:  
I: Schloß Dyck  
II: Düsseldorf City  
III: Industriepark Duisburg

## Thursday 18. May 2017

<b>8:30 – 10:20h Session 6: Fusion devices and edge plasma physics</b>			
Chair: William Wampler			
08:30h	I10	Ezekial Unterberg	Multiple Tungsten Divertor Source, Migration and Core Impact Characterization for DIII-D ELM-y H-mode Conditions
09:00h	I11	Armin Weckmann	High-Z Material migration, fuel retention and liner morphology of the TEXTOR tokamak
09:30h	O10	Dmitry Rudakov	Power loading and melting at high-Z PFC leading edges in DIII-D divertor
09:55h	O11	Alexander Huber	The Near Infrared Imaging System for the Real-Time Protection of the JET ITER-like wall
10:20 – 10:40h Coffee Break			
<b>10:40 – 12:30h Session 7: Materials under extreme thermal loads</b>			
Chair: Igor Mazul			
10:40h	I12	Scott Silburn	Mitigation of Divertor Heat Loads by Strike Point Sweeping in high Power Discharges
11:10h	I13	Leonid Vyacheslavov	Dynamics of tungsten surface erosion and dust ejection under ITER-scale fast heat loads simulated by sub-millisecond electron beam
11:40h	O12	Marius Wirtz	High pulse number thermal shock tests on tungsten with steady state particle background
12:05h	O13	Nicolay Klimov	Structure Transformation of W under D and He Plasma Heat Loads Relevant to ITER Transient Plasma Events at QSPA-T Plasma Gun Facility
12:30 – 14:10h Lunch Break (own cost)			
<b>14:10 – 16:00h Session 8: Erosion, redeposition, dust, and fuel retention</b>			
Chair: Marek Rubel			
14:10h	I14	Suguru Masuzaki	Analyses of Structure, Composition and Retention of Hydrogen Isotopes in the JET-ILW Divertor Tiles
11:10h	I15	Juri Romazanov	First ERO2.0 modelling of Be erosion and non-local transport at JET ILW
11:40h	O14	Kalle Heinola	Experience on divertor fuel retention after two JET ITER-Like Wall campaigns
12:05h	O15	Victoria Winters	Measurement of particle fluxes and their relation to carbon erosion at limiters in the helical scrape-off layer of start-up plasmas at W7-X
16:00 – 18:30h Poster Sessions 2 and Coffee Break			
<b>19:30 – 22:00h Dinner at the Rheinterassen Düsseldorf</b>			

## Friday 19. May 2017

<b>8:30 – 10:20h Session 9: Fuel retention</b>			
Chair: Wolfgang Jacob			
08:30h	I16	Klaus Schmid	Recent Progress in the Understanding of H Transport and Trapping in W
09:00h	I17	Sabina Markelj	In situ benchmark experiments on hydrogen retention in self-damaged tungsten
09:30h	O16	Thomas Schwarz-Selinger	Unravelling the influence of helium on deuterium transport and retention in tungsten
09:55h	O17	Arkadi Kreter	Influence of plasma impurities on the fuel retention in tungsten
10:20 – 10:45h Coffee Break			
<b>10:45 – 12:30h Session 10: Low-Z materials</b>			
Chair: Christian Linsmeier			
10:45h	I18	Dmitry Matveev	Reaction-diffusion modelling of hydrogen retention, transport and surface effects in beryllium
11:15h	O18	Daniel Alegre Castro	Parametric study of Helium retention in Beryllium and its effect on Deuterium retention
11:40h	O19	Paco Tabarés	Comparative studies in TJ-II of Li and LiSn alloys in a Capillary Porous System
12:05h	O20		Post-deadline oral contribution
12:30 – 13:00h Closing Session			
12:30h Closing Sebastijan Brezinsek and the Chair of PFMC 2019			

# Poster Session 1

P1-01	Experimental tests of Real-Time Protection System for Plasma Facing Components at Wendelstein 7-X A. Adnan
P1-02	Bulk material response to non-uniform power loads in the divertor during the DIII-D metal tile campaign J. Barton
P1-03	Influence of Near-Surface Blisters on Deuterium Transport in Tungsten: Experiment and Modelling J. Bauer
P1-04	Tungsten as a plasma-facing materials in fusion devices: impact of helium high-temperature irradiation on hydrogen retention E. Bernhard
P1-05	ERO modelling for Be erosion by Ar and He plasma at PISCES-B D. Borodin
P1-06	An improved estimation of intra-ELM tungsten sputtering at JET ITER-like Wall I. Borodkina
P1-07	Spectroscopic determination of inverse photon efficiencies of W atoms in the scrape-off layer of TEXTOR S. Brezinsek
P1-08	High temperature thermodesorption measurements of helium in tungsten V. Burwitz
P1-09	Effect of Unipolar Arcing on Material Erosion During the Metal Tile Campaign in DIII-D I. Bykov
P1-10	Study of time-resolved deposition in the remote region of the JET-ILW divertor N. Catarino
P1-11	Hydrogen interaction with interstitial type defects of any size from atomistic to mesoscopic scales in BCC tungsten A. De Backer
P1-12	DEVELOPMENT OF W-PIM/EUROFER BRAZED JOINTS J. De Prado

P1-13	Preparation of Erosion and Deposition Investigations on Plasma Facing Components in Wendelstein 7-X C.P. Dhard
P1-14	In-situ plasma cleaning of ITER diagnostic mirrors in noble-gas RF discharge A. Dimitriev
P1-15	Evaluation of the plasma hydrogen isotope content by residual gas analysis at JET and AUG A. Drenik
P1-16	Tritium behaviour in beryllium investigated by DFT L. Ferry
P1-17	Search for mobilized dust: fine metal particles on wall probes from JET-ILW E. Fortuna-Zalesna
P1-18	Infrared thermography inspection of novel divertor target components for DEMO F. Gallay
P1-19	On the Formation and Annealing Behaviour of Deuterium Supersaturated Tungsten Surfaces due to Low-energy Plasma-loading L. Gao
P1-20	Realtime Monitoring of First Wall Conditions in EAST Using Laser Induced Ablation Spectroscopy (LIAS) N. Gierse
P1-21	Results of high heat flux qualification tests of W monoblock components for WEST H. Greuner
P1-22	High Heat Flux Test Facilities for PFCs testing in Efremov Institute V. Prianikov
P1-23	Tritium Analysis of Divertor Tiles Used in JET ITER-like Wall Campaigns by Means of $\beta$ -ray Induced X-ray Spectrometry Y. Hatano
P1-24	RMP Effects on Gross Tungsten Erosion using DiMES in DIII-D E. Hinson

P1-25	Examination for Leak Tightness of Actively Cooled Plasma-Facing Components in ITER and Fusion Devices T. Hirai
P1-26	Estimation of the tritium retention in ITER Tungsten divertor target using macroscopic rate equations simulations E. Hodille
P1-27	Development of laser-based technology for routine first wall diagnostic on the tokamak EAST: Laser induced breakdown spectroscopy (LIBS) Z. Hu
P1-28	Spectroscopic studies on atomic excited state formation in reflection and sputtering induced by ion-beam bombardment on tungsten surfaces D. Kato
P1-29	Micro-NRA with microbeam on samples exposed in ASDEX Upgrade M. Kelemen
P1-30	Preparation and characterization of W-based composites for fusion application M. Kocen
P1-31	The Effect of High Energy Ion Beam Analysis on D Trapping in W J. Davis
P1-32	Formation, destruction and isotope exchange of ammonia in deuterium and helium plasma in PSI-2 T. Dittmar
P1-33	Applications of Inductively Coupled Plasma Mass Spectroscopy to the Isotopically Enriched Metal Tiles Campaign at DIII-D D. Donovan
P1-34	ERO modelling of experiments on Cr sputtering at linear plasma device PSI-2 A. Eksaeva
P1-35	Tungsten coating by ATC Plasma Spraying on CFC for WEST tokamak M. Firdaouss
P1-36	Experimental investigation of the process of tungsten ablation under the ITER-scale transient heat loads A. Kasatov

P1-37	Modification, alloying and sputtering tests of Cr18Ni10Ti and EUROFER steels V. Makhelai
P1-38	Plasma Cleaning of ITER First Mirrors L. Moser
P1-39	Hydrogen isotope retention enhancement for QUEST high temperature wall by long duration hydrogen plasma operation Y. Oya
P1-40	Spectroscopy for plasma material interaction studies at the linear plasma device PSI-2 T. Schlummer
P1-41	Modeling of Nanotendrils Formation in Helium-Ion-Irradiated Tungsten D. Dasgupta
P1-42	Pre-plasma mobilization of magnetic dust and possible interference with tokamak operations M. De Angeli
P1-43	Synthesis of porous and nano W-O-N, WN <sub>x</sub> and W-O coatings: D retention and outgassing from supersaturated surfaces D. Dellasega
P1-44	Compressive Characteristics of W/Cu and W/CuCrZr Composites M. Eddahbi
P1-45	Investigation of hydrogen isotope retention mechanisms in beryllium and tungsten materials M. Eichler
P1-46	Influence of the microstructure of yttrium oxide coatings on the permeation barrier performance J. Engels
P1-47	Effects of Machining and Polishing on the Near-Surface Region of Tungsten for Use as a Plasma-Facing Component L. Garrison
P1-48	Formation of nano bubbles on Al samples by deuterium plasma interaction in a small plasma focus device H. Morteza

P1-49	The Temperature Dependent Nitrogen Retention in Tungsten Studied by XPS-Analysis T. Hörschen
P1-50	Time-resolved Thomson Scattering of Plasma Filaments in PSI-2 M. Hubeny
P1-51	Investigation of the development of hot spots on metallic PFCs in the JET-ILW by the Hotspot Editor V. Huber
P1-52	Coating of tungsten carbide composites for accident tolerance S. Humphry-Baker
P1-53	Short SiC-fibre reinforced tungsten-based composites for divertor P. Jenuš
P1-54	Investigation of Deuterium Retention Dynamics of Tungsten Irradiated by Carbon and Tungsten Ions Y. Jin
P1-55	Advanced approach to the local structure reconstruction and theory validation on example of the W L3-edge EXAFS of tungsten I. Jonane
P1-56	Computational results for the small molecular clusters $Be_nW_m$ , $Be_nH_m$ and $W_nH_m$ with $n+m \leq 4$ atoms A. Kaiser
P1-57	WalIDYN simulations of beryllium migration during ITER non-active phases A. Khan
P1-58	Particle and Heat Load Testing of Plasma Facing Components for the Fusion Research in Korea S. Kim
P1-59	ELM-resolved recycling and impurity source measurement capability for tungsten PFCs in WEST C. Klepper
P1-60	Near-surface morphology changes to helium plasma-exposed tungsten characterized with spectroscopic ellipsometry R. Kolasinski

P1-61	Atomistic simulations of radiation damage and defect recombination kinetics in neutron irradiated sapphire E. Kotomin
P1-62	Assesment of the re-erosion probability in the ITER main chamber port-plugs V. Kotov
P1-63	Comparison of secondary electron emission yield of tin-lithium and tin V. Kvon
P1-64	Erosion and nitrogen uptake in nanostructured tungsten films exposed to the nitrogen seeded deuterium plasmas of the linear machine GyM L. Laguardia
P1-65	Deuterium retention in the limiter tiles of the JET ITER-Like Wall in 2013-2014 A. Lahtinen
P1-66	Laser-Induced Breakdown Spectroscopy for W7-X Tile Analysis in OP1.1 C. Li
P1-67	Mapping deuterium-vacancy complexes in low-energy high flux plasma-loaded tungsten surfaces Y. Li
P1-68	Refinement process and mechanisms of tungsten powder by high energy ball milling Y. Liang
P1-69	Interface designed short-tungsten-fiber-reinforced tungsten composites sintered by hot isostatic pressing F. Liu
P1-70	Blister formation and hydrogen retention on ITER relevant materials G. Lombardi
P1-71	Work Function of Fuzz W and $WO_3$ L. Marot
P1-72	Helium effects on deuterium desorption from EUROFER 97 and P92 steels after high fluence $D^+ + He^+$ plasma exposures Y. Martynova

P1-73	First results with a Tin liquid limiter on FTU G. Mazitelli
P1-74	Investing the timescales in which helium embrittlement occurs within breeder blanket steels under DEMO conditions L. Menzies
P1-75	Comparative Study of the Mechanical Properties of Different Tungsten Materials for Fusion Applications K. Mergia
P1-76	Helium fuzz growth in relation to temperature, flux, fluence, sputtering and helium admixture studied in-situ by infrared imaging in PSI-2 S. Möller
P1-77	High flux and high fluence capabilities achieved at the Magnum-PSI linear device T. Morgan
P1-78	In-situ solid state processing of dispersion strengthened copper A. Munoz
P1-79	Sputtering Yield's Dependence on Structure of Tungsten Irradiated by Hydrogen and Argon H. Nakamura
P1-80	Sputtering Behavior of Chromium Under High-Flux Helium Plasma Exposure D. Nishijima
P1-81	Relation of the temperature dependence of W fuzz formation with defect trapping K. Nordlund
P1-82	Depth resolved analysis of hydrogen content in W7-X tiles with Short Pulse Laser Ablation Gas analysis (SPLAG) J. Oelmann
P1-83	Deuterium solubility and retention in liquid tin W. Ou
P1-84	Multiwavelength Raman microscopy study of laboratory tungsten samples: in search of native oxides and W-D bonds C. Pardanaud

P1-85	Preparing the future post-mortem analysis of beryllium-based JET and ITER samples by multi-wavelengths Raman spectroscopy C. Pardanaud
P1-86	Development of a method to prepare thin metal films samples with controlled small/large aspect ratio roughness M. Pedroni
P1-87	Sputtering tests of single crystalline Mo and Rh mirrors for ITER J. Peng
P1-88	Theoretical study of material melting and boiling under the ITER-scale pulsed heat loads simulated by electron beam V. Popov
P1-89	Integrated liquid lithium divertor modelling for DEMO M. Poradzinski
P1-90	Prediction of the particles production by inertial neutron irradiation S. Sangaroon
P1-xx	post deadline
P1-xx	post deadline

# Poster Session 2

P2-01	Erosion, deposition and deuterium inventory of the bulk tungsten divertor tile during the second JET ITER-like wall campaign S. Krat
P2-02	Longitudinal and shear wave velocities in pure W and tungsten fiber-reinforced tungsten composites H.T. Lee
P2-03	Investigation of deuterium trapping and release in the JET divertor during the second ILW campaign using TDS and TMAP J. Likonen
P2-04	High Pulse Number Thermal Shock Tests on Two Reference Tungsten Products T. Loewenhoff
P2-05	Deep retention of hydrogen in actively cooled bulk tungsten H. Maier
P2-06	Development and characterization of powder metallurgically produced random discontinuous tungsten fiber reinforced tungsten composites Y. Mao
P2-07	Tungsten oxide thin films : Thermal stability and Helium bombardment C. Martin
P2-08	Ammonia sticking on surfaces B.Y. Marwa
P2-09	Dynamic Power Balance Analysis in JET G.F. Matthews
P2-10	Erosion and deposition in the JET divertor during the second ILW campaign M. Mayer
P2-11	Improvement of Structural Strength and Lifetime of Monoblock Divertor under Cyclic High Heat Flux Loading by Using a Doped Tungsten Alloys S. Nogami
P2-12	Correlation of deuterium retention with crystalline structure in dense and disordered tungsten coatings O. Ogorodnikova

P2-13	Detection of deuterium retention by LIBS at different background pressures P. Paris
P2-14	Neutron irradiation and PMI effects on microstructure and mechanical properties of tungsten C. Parish
P2-15	The microstructure of RAFM steels exposed to D plasma with different seeding impurities M. Rasinski
P2-16	Plasma-Wall Interactions in the Presence of Plasma Fluctuations - Interpretation of Line Emission from Sputtered Tungsten in PSI-2 D. Reiser
P2-17	Deformation behaviour of drawn tungsten wire used in tungsten fibre-reinforced tungsten composites J. Riesch
P2-18	Possibility of Fatigue Crack Accompanying Recrystallization on the Tungsten due to ELMy H-mode Operation-relevant Transient HHF K.B. Roh
P2-19	Metallic mirrors for plasma diagnosis in current and future reactors: Tests for ITER and DEMO M. Rubel
P2-20	Deuterium thermal desorption and re-emission from RAFM steels S. Ryabtsev
P2-21	Multi-Scale Modelling to Relate Beryllium Surface Temperature S. Elnaz
P2-22	Thermal Shock Induced Oxidation of Beryllium B. Spilker
P2-23	Melt layer motion simulations with thermionic current constraints for an exposed tungsten edge in ASDEX Upgrade E. Thorén
P2-24	Investigation of the JET tokamak ITER-Like Wall Be Marker Tiles P. Tsavalas



P2-25	Plasma exposure of tungsten in the linear plasma device PSI-2 produced via powder injection molding B. Unterberg
P2-26	Sputtering and Reflection Yields of 3-D surface morphologies U. von Touissant
P2-27	Measurements of Tungsten Migration in the DIII-D divertor W. Wampler
P2-28	Impurity re-distribution in the corner regions of the JET divertor A. Widdowson
P2-29	Plasma Exposure Time Dependence of Deuterium Retention in Neutron-irradiated Tungsten M. Yajima
P2-30	Transient Heating Causes Increased Cracking of Be-W Alloy Compared to W J. Yu
P2-31	Fuel retention and recycling studies via particle balance in EAST tokamak Y. Yu
P2-32	Deuterium retention and surface modification of tungsten exposed to deuterium-neon mixed plasma and combined with transient heat loads Y. Yuan
P2-33	Studies on hydrogen isotopes transport in W/Cu and W/RAFMs plasma-facing components H. Zhou
P2-34	Thermal mechanical response and evolution of tungsten under ITER relevant transient heat flux: roughness, cracking and fatigue effect D. Zhu
P2-35	Investigation of deuterium interaction with lattice defects in tungsten M. Zibrov
P2-36	Validating a Reduced System of Coupled Traps in a Thermal Desorption Model M. Simmonds

P2-37	Electron Beam Treatment of Tungsten Mock-ups R. Zalavutdinov
P2-38	The effect of sample temperature on deuterium atom uptake in self-damaged tungsten A. Zaloznik
P2-39	Picosecond LIBS Diagnostics For Tokamak Applications A. Blutel
P2-40	Measuring hydrogen retention kinetics and composition change in pure LiH as a function of temperature M. Christenson
P2-41	A Molecular Dynamics Study of the Effects of Subsurface Helium Bubbles on the Diffusion of Helium and Hydrogen in Tungsten M. A. Cusentino
P2-42	Thermal barriers for DEMO W-monoblock divertor M. Galatanu
P2-43	Mechanical and microstructural characterization of tungsten and tungsten oxide irradiated by heavy ion beam J. Habainy
P2-44	Primary Neutron Damage and Cascades in Tungsten and the Ramifications for Plasma Damage A. Hassain
P2-45	D retention and wetting studies on tungsten-liquid metal hybrid systems A. Kapat
P2-46	Radiation induced changes in thermal, electrical and dynamic response properties of tungsten foils under pulsed heavy ion beam Y.J. Lee
P2-47	Modelling recrystallization and grain growth of tungsten induced by neutron displacement defects A. Mannheim
P2-48	On the Structural and Chemical Homogeneity of Spark Plasma Sintered Tungsten J. Matejcek

P2-49	Bend strength of vacuum-plasma-spray tungsten coating for the first wall of fusion blanket T. Nagasaka
P2-50	Interactions of Lithium and Tungsten Nano-Structured "Fuzz" Under Ion Irradiation A. Neff
P2-51	Degradation of thermal conductivity of tungsten surface irradiated by helium plasma S. Qu
P2-52	Development of a Model for Hydrogen Recycling on Carbon Divertor by Molecular Dynamics Simulation S. Saito
P2-53	Emission dynamics of tungsten fuzz in response to ELM-like heat loading G. Sinclair
P2-54	In-situ irradiation of metal-ceramic composite neutron shielding materials G. Smith
P2-55	Removal of retained tritium in C-W mixed material layer on tungsten by deuterium gas exposure A. Togari
P2-56	Effect of doping elements on microstructure, phase content and thermal properties of W-Ti alloys M. Vilémová
P2-57	Synthesis of tungsten alloys for fusion D. Vrel
P2-58	Simulation of Helium Exposed Tungsten Erosion and Redistribution and Sub-Surface Gas Behaviour In PISCES T. Younkin
P2-59	Deuterium detection by laser-induced-breakdown-spectroscopy in ITER relevant samples at high nitrogen pressure S. Almviva
P2-60	Recent progress in development of dynamical diagnostics of material deformation during pulsed heat loads A. Arakcheev

P2-61	Large size dust particles produced by high heat loads in Alcator C-Mod C. Arnas
P2-62	Development of a dust/impurity injector for the WEST tokamak C. Autricque
P2-63	The effect of He nanobubble on inhibiting D trapping in radiation damaged tungsten Q. Bai
P2-64	Optical and electron microscopy studies of W langmuir probes from JET ILW-2 A. Baron-Wiechec
P2-65	Density Functional Theory Modeling of Hydrogen-Helium Interactions Near Tungsten (110) Surface Z. Bergstrom
P2-66	Thermomechanical behaviour of W under nanosecond laser induced thermal loads E. Besozzi
P2-67	Cluster dynamics predictions of helium retention and bubble formation in tungsten: implantation rate, temperature and bubble bursting effects S. Blondel
P2-68	Calculation of cracking for tungsten under both steady-state heat load and transient heat flux J. Chen
P2-69	Mechanical characterization of W exposed to deuterium plasma by nanoindentation W. Chen
P2-70	Current status of data for erosion and tritium retention in Beryllium, irradiated Tungsten and Reduced activation Steel surfaces in fusion devices H.-K. Chung
P2-71	Modelling of W / W alloy: Brittle Fracture M. Conte
P2-72	PG-QRO-1 Low Energy Deuterium Plasmas for PWI-Studies G. Ramos

P2-73	Numerical codes based transmutation and PKA analysis of 30 MeV proton irradiation of tungsten towards simulating fusion neutron irradiation behaviour R. Rayaprolu
P2-74	Deposition mitigation in ITER diagnostic ducts A. Razdobarin
P2-75	Testing of a Pre-Loaded Liquid Lithium Divertor Target on Magnum-PSI P. Rindt
P2-76	C/Mo marker coatings for measurement of erosion in the stellarator Wendelstein 7-X C. Ruset
P2-77	Pulse-resolved measurements of material migration in the JET-ILW divertor by quartz crystal microbalance G. Sergienko
P2-78	Microstructural changes of W and W-W <sub>2</sub> C composite due to He-implantation A. Šestan
P2-79	MD and Adaptive Kinetic Monte Carlo Study of Hydrogen and Helium Diffusion/Trapping/Clustering in First-Wall Tungsten A. Scharma
P2-80	Influence of Surface Structural Modifications on the Sputtering Yield of Iron R. Stadlmayr
P2-81	New WCrY smart alloys for DEMO power plant manufactured by mechanical alloying and spark plasma sintering X. Tan
P2-82	Surface Topography and Development of Cracks in Ferritic-Martensitic Steel Exposed to Low-Energy Deuterium Plasma G. Tolstolutsкая
P2-83	Investigation on tungsten surface erosion by in-situ optical diagnostics during ITER-relevant pulsed heat loads generated with an electron beam A. Vasilyev
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