

# PSI27 – Regensburg

## Poster Sessions

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### Monday, May 18 2026 – Poster Session 1

- Loic Corso** **Forum 9**  
1.014 Helium bubbles migration characterized by in-operando GISAXS and in-situ TEM
- Robert Kolasinski** **Forum 9**  
1.016 Exposure of advanced tungsten materials and ultra-high temperature ceramics to divertor plasmas in DIII-D: Analysis of erosion, surface morphology changes, recrystallization, and surface cracking
- Michael Simmonds** **Forum 9**  
1.017 Thermal and elastic property evolution of displacement damaged tungsten at fusion-relevant annealing temperatures
- Benjamin Burazor Domazet** **Forum 9**  
1.019 Angular distributions of sputtered particles: influence of surface topography and texture
- Youpeng Wang** **Forum 9**  
1.020 First mirror cleaning and impedance characterization for the ITER Core Plasma Thomson Scattering diagnostic
- V Kotov** **Forum 9**  
1.021 Application of the linear plasma device PSI-2 as benchmark of hydrogen plasma chemistry
- Yukinori Hamaji** **Forum 9**  
1.023 an experimental study of interaction between plasma and flowing Sn free-surface
- Daniel Primetzhofer** **Forum 9**  
1.118 The impact of boron on tungsten plasma facing walls: sputter yields, near-surface morphology, and fuel retention
- Davis Easley** **Forum 9**  
1.119 Development and validation of an integrated SOLPS-EPED model in MAST-U
- Matej Mayer** **Forum 8**  
1.024 Transport of light impurities in Wendelstein 7-X
- Jeremy Mateja** **Forum 8**  
1.026 Testing low-Z PFC slag removal with strike point sweeping on DIII-D tokamak
- Raphael Gurschl** **Forum 8**  
1.027 Sputtering behavior of tungsten-boron mixed layers
- Ionut Jecu** **Forum 8**  
1.028 Overview of runaway electron (RE) interaction with the beryllium inner limiters in JET

- Marc Sackers** **Forum 8**  
1.029 Physical and chemical erosion of thin boron and amorphous boron-hydride films investigated at the linear plasma device PSI-2
- Noriyasu Ohno** **Forum 8**  
1.030 Sputtering Behavior of He–W Co-Deposited Layers: Experiments and Modeling
- Mykola Ialovega** **Forum 8**  
1.031 Impact of energetic fusion products on the first wall of a GenF's ICF reactor
- Samuli Saari** **Forum 8**  
1.032 Experimental analysis of Pt marker erosion in the outer divertor region of ASDEX Upgrade during L- and H-mode discharges
- Gabriele Alberti** **Forum 8**  
1.033 Modelling divertor erosion and tungsten core contamination in DTT negative triangularity scenario
- Fan Feng** **Forum 8**  
1.034 Surface morphology damage of rolled W-K plates under different high heat load
- Clément Monet-Vidonne** **Forum 8**  
1.035 Thermophysical characterization of surface deposits from the first high fluence campaign of WEST
- Chandra Prakash Dhard** **Forum 8**  
1.039 Tungsten erosion and injection investigations in the stellarator Wendelstein 7-X: Results from OP2.1-2.3
- D. L. Rudakov** **Forum 8**  
1.040 Divertor Material Evaluation System (DiMES) at the DIII-D tokamak: 30 years of PMI research
- Andreas Kirschner** **Forum 8**  
1.041 Modelling of tungsten prompt redeposition at the inner wall of ITER during ramp-up
- Christoph Kawan** **Kleines Forum**  
1.042 Quantified depth profiling of deeply located deuterium with ps-laser-induced ablation quadrupole mass spectrometry
- Andreas Theodorou** **Kleines Forum**  
1.043 Thermal desorption and retention of deuterium in helium-implanted and displacement-damaged EUROFER97 at reactor-relevant temperatures
- Anurag Maan** **Kleines Forum**  
1.044 Beam fueling low recycling discharges with modest lithium impurity fraction in LTX-beta
- Rongxing yi** **Kleines Forum**  
1.045 Doppler Shift of Hydrogen Balmer-alpha in picosecond Laser Induced Breakdown Spectroscopy on W substrates: The Art of Timing and Wavelength Tuning

- Alexander Feichtmayer** **Kleines Forum**  
1.046 Investigating the Soret Effect of Deuterium in Metals – A Novel Approach Using Ion Beam Analysis
- Laurent COLAS** **Kleines Forum**  
1.048 The plasma content in hydrogen and its control on the full-metal tokamak WEST, from restart phases to long pulses.
- Maria Popova** **Kleines Forum**  
1.051 Near-surface hydrogen inventory response to picosecond laser pulses in tungsten.
- Tom Wauters** **Kleines Forum**  
1.053 Parametric Study of Plasma-Driven Permeation in the Diagnostic First Wall of ITER
- Tomi Vuoriheimo** **Kleines Forum**  
1.057 Effect of boron coatings on hydrogen isotope exchange effect in tungsten
- Anne Houben** **Kleines Forum**  
1.058 Boronization in ITER: Study of the hydrogen isotope interaction and isotope exchange in B:D layers
- Ralph Dux** **Kleines Forum**  
1.059 Spectroscopic characterisation of boronisation glow discharges in ASDEX Upgrade
- Fotios Maragkos** **Kleines Forum**  
1.061 Boronization and erosion rates of samples exposed in the W7-X stellarator
- Sebastijan Brezinsek** **Kleines Forum**  
1.062 Investigation of boron distribution on multiple anodes applied in W7-X using ex-situ picosecond laser-induced breakdown spectroscopy
- Alessandro Bortolon** **Kleines Forum**  
1.063 A heuristic model for the effects of real-time and glow discharge boronization
- Frederik Henke** **Kleines Forum**  
1.065 Experimental investigations of impurity enrichment in the divertor of Wendelstein 7-X
- Curtis Johnson** **Kleines Forum**  
1.067 Prompt Redeposition of Divertor and ICRH-Sourced Tungsten in WEST Measured with Ultraviolet W I/W II Spectroscopy
- Alex GROSJEAN** **Kleines Forum**  
1.069 Impact of plasma shape on impurity sources and resulting W core contamination in KSTAR and WEST.
- Tyler Abrams** **Kleines Forum**  
1.072 Advancing Fusion Pilot Plant Readiness through the Tungsten Wall Transition on DIII-D
- Volodymyr Bobkov** **Kleines Forum**  
1.074 Linking simulated ICRF sheath-rectified potentials to measurements in ASDEX Upgrade and JET

- Nicolas RIVALS** **Kleines Forum**  
1.076 Operational space exploration of the X-Point Radiator scenario in WEST
- Valeria Perseo** **Kleines Forum**  
1.078 Increased power and performance at Wendelstein 7-X: effect on the scrape-off layer transport and first attempts of combined core/edge scenarios
- Jae-Sun Park** **Kleines Forum**  
1.079 Physics of the decay length broadening and asymmetry: Insights from SOLPS modelling
- Adriano Stagni** **Kleines Forum**  
1.080 Detachment of type-I ELMy H-mode TCV plasmas via nitrogen seeding and correlations with scrape-off layer properties
- Andreas Holm** **Kleines Forum**  
1.082 Passive detachment front stabilization in baffled divertors using upstream pumping
- Yanjie Zhang** **Kleines Forum**  
1.084 Effects of triangularity on power asymmetry and detachment in TCV double-null plasmas using SOLPS-ITER with drifts
- Marco Cavedon** **Kleines Forum**  
1.085 Divertor Turbulence Control via Leg Geometry: Experimental Tests on TCV tokamak
- Tilmann Lunt** **Kleines Forum**  
1.087 3D detachment in the new upper divertor of ASDEX Upgrade induced by a local gas-puff
- Patrick Tamain** **Kleines Forum**  
1.088 Evaluation of light impurity turbulent transport in the edge plasma from 3D multi-fluid turbulence simulations
- Michele Lambresa** **Kleines Forum**  
1.089 Impact of the toroidal field direction on SOLEDGE3X 3D turbulent simulations of the COMPASS boundary plasma
- Dieter Boeyaert** **Kleines Forum**  
1.090 Analysis of non-resonant divertor experiments in W7-X
- Carsten Killer** **Kleines Forum**  
1.092 Perpendicular transport by turbulence and drifts in the W7-X island divertor
- Vesa-Pekka Rikala** **Kleines Forum**  
1.093 EDGE2D-EIRENE and EIRENE interpretation of Balmer and Fulcher band emission in JET-ILW Ohmic deuterium plasmas
- Sebastian Hörmann** **Kleines Forum**  
1.094 Fast processes in the divertors of Wendelstein 7-X and ASDEX Upgrade

- Erin Joy Tinacba** **Kleines Forum**  
1.097 Classifying ST40 plasmas through SepOS framework
- Sergio Garcia Herreros** **Kleines Forum**  
1.098 Study of alternative divertor configurations with first-principles, self-consistent, global turbulence simulations
- Andrei Pshenov** **Forum 7**  
1.100 ITER Q = 10 divertor operational window with realistic plasma-facing component geometry
- Ulrich Stroth** **Forum 7**  
1.103 On the influence of impurity species and X-point geometry on accessibility and dissipation capacity of X-point radiators in fusion reactors
- Andrei Khodak** **Forum 7**  
1.104 Diffusion Pump Divertor for Fusion Devices
- Vsevolod Soukhanovskii** **Forum 7**  
1.105 SNOWFLAKE DIVERTOR STUDIES IN MAST-U TOKAMAK AND OUTLOOK FOR NSTX-U
- Yu Gao** **Forum 7**  
1.108 Empirical scaling of divertor heat loads in Wendelstein 7-X
- Anastasia Poletaeva** **Forum 7**  
1.109 Dynamic SOLPS-ITER modelling of the X-point radiator regime in ITER
- Michael Faitsch** **Forum 7**  
1.110 The exhaust capability of the quasi-continuous exhaust regime
- Nicola Lonigro** **Forum 7**  
1.111 Investigating the role of baffling, fuelling location, and total flux expansion on detachment front location sensitivity in MAST-U discharges
- Auna Moser** **Forum 7**  
1.112 Heat flux expansion in high heat flux experiments on DIII-D
- David Rees** **Forum 7**  
1.113 Detachment in JET-ILW L-mode deuterium and helium plasmas: Experimental and SOLPS-ITER comparison
- Sarah Elmore** **Forum 7**  
1.114 Effect of divertor geometry on neutral compression, SOL width and broadening in MAST Upgrade
- Ivan Paradela Perez** **Forum 7**  
1.115 Effect of Drift Driven Fluxes, Magnetic Geometry Bias, and Operational Actuators on Upper/Lower Asymmetries in MAST-U
- Hang Si** **Forum 7**  
1.117 Effect of strike point position on the divertor heat load for Japanese DEMO

**Gabrielle Koknat**

**Forum 7**

Non-Equilibrium Ion Dynamics in Tungsten: A Machine Learning Approach to Radiation Damage

# PSI27 – Regensburg

## Poster Sessions

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### Tuesday, May 19 2026 – Poster Session 2

- Quan Shi** **Forum 7**  
2.023 Temperature threshold reduction of W fuzz formation affected by surface pre-treatment
- SOOHYUN SON** **Forum 7**  
2.024 Characteristics of boron layers deposited during boronization and boron powder injection in KSTAR
- Vadym Makhlai** **Forum 7**  
2.025 SURFACE DAMAGE OF ITER-GRADE TUNGSTEN UNDER SEQUENTIAL IRRADIATION WITH HELIUM ION BEAM AND HIGH HEAT FLUXES OF QSPA HYDROGEN PLASMA
- Hozane Blanche NGONGANG ELOKO** **Forum 7**  
2.026 Growth and coalescence of He bubbles in W
- John Caughman** **Forum 7**  
2.027 The effect of the radio frequency sheath on the sputtering of plasma facing materials
- Jake Nichols** **Forum 7**  
2.028 3D modeling of target-plasma interactions at oblique angles of incidence in MPEX-like linear plasma devices
- Athanasios Bamidis** **Forum 7**  
2.030 Fundamental quantities in ion-solid interaction at fusion relevant energies - interatomic potentials of Cr assessed using low-energy ions
- Lorenzo Boccaccia** **Forum 7**  
2.033 Survivability of boron dust and powder in edge fusion plasmas
- Seiki Saito** **Forum 7**  
2.034 Machine Learning for Hydrogen Recycling Modeling
- Tommaso Rizzi** **Forum 7**  
2.036  $\beta$ -decay induced self-charging of tritiated tungsten dust in fusion reactors
- Tatyana Sizyuk** **Forum 7**  
2.037 Self-consistent integrated modeling of processes taking place during plasma material interactions in Tokamaks
- Martin Balden** **Forum 7**  
2.039 Net erosion of molybdenum coated ICRH limiter tiles in ASDEX-Upgrade
- Pry Virtanen** **Forum 7**  
2.041 Limiter phase nickel migration in the JET ITER-Like wall

- Marco De Angeli** **Forum 7**  
2.042 Thermal transition of W-on-W adhesion from van der Waals interactions to metallic bonding
- Arkadi Kreter** **Forum 7**  
2.043 In-situ measurements of boron erosion and redeposition in deuterium plasma in the linear plasma device PSI-2
- Daniel Gautam** **Forum 7**  
2.044 In-situ investigation of oxygen trapping in tungsten, boron and mixed thin-films during thermal annealing using ion beams
- Daniel Gautam** **Forum 7**  
2.045 Neon retention in tungsten, boron and mixed thin-films under the effects of thermal annealing studied by isotopic tracing
- Antti Hakola** **Forum 7**  
2.046 Reference boron layers for investigating the formation and characteristics of boron-based co-deposits in tokamaks
- Andrea Uccello** **Forum 7**  
2.047 Erosion behaviour of compact and porous boron layers exposed to deuterium plasma in the GyM linear device
- Sean Kosslow** **Forum 7**  
2.048 Experimental evidence of the loss of boronization effectiveness by plasma redeposition in WEST
- Prashant Dwivedi** **Forum 7**  
2.051 Helium Topology Controlled Erosion of Tungsten Under High velocity Dust Impacts: Molecular Dynamics Insights
- Jort van Kesteren** **Forum 7**  
2.054 Chemical Erosion and Deuterium Retention of Boron Thin Films using in-situ Ion Beam Analysis in Upgraded Pilot-PSI
- Sangeetha Sasidharan** **Forum 7**  
2.118 Recent analysis of tungsten dust in ASDEX Upgrade
- Gakushi Kawamura** **Forum 9**  
2.055 First-in-kind plasma transport modeling of EC wall-conditioning of JT-60SA with EMC3-EIRENE code
- Céline MARTIN** **Forum 9**  
2.056 Chemical and physical properties of boron layers produced during non-uniform glow discharge boronization in the WEST tokamak
- Joseph Snipes** **Forum 9**  
2.057 Analysis of Solid Boron Injection for ITER
- Sanah Hussain** **Forum 9**

2.058 Influence of boron-containing films on optical and emissive properties of tungsten

**Huace Wu**

**Forum 9**

2.060 Characterization of boron layers on tungsten substrates by picosecond laser-induced breakdown spectroscopy

**Hiroaki Nakamura**

**Forum 9**

2.061 Molecular Dynamics Investigation of Carbon-Based Hydrogen Recycling Control in Plasma-Facing Walls

**Braden Moore**

**Forum 9**

2.063 Deuterium Implantation and Thermal Extraction in the Actively Pumped Open-Surface Lithium LOop (APOLLO)

**Henri Kuivasniemi**

**Kleines Forum**

2.064 Measurements and OEDGE predictions of the scrape-off layer plasma conditions and Balmer emission in JET-ILW horizontal and vertical divertor plasma configurations

**Victoria Winters**

**Kleines Forum**

2.065 EMC3-Eirene simulation of neutral source effects on density build-up in the W7-X island divertor

**Mathias Groth**

**Kleines Forum**

2.066 Impact of Lyman opacity on divertor plasma and neutral conditions in DIII-D

**Linnéa Björk**

**Kleines Forum**

2.067 Development of multi-diagnostic Bayesian analysis tool for inference of plasma parameters in the W7-X island divertor

**Sebastian Draeger**

**Kleines Forum**

2.068 Analysis of the secondary strike line in Wendelstein 7-X's higher plasma beta scenarios

**Hugo Corvoysier**

**Kleines Forum**

2.069 Investigating the main dependencies in heat-flux decay length scalings using first-principles turbulence codes

**Joey Louwe**

**Kleines Forum**

2.070 Predicting MANTIS performance in W7-X: Synthetic Modeling of the Expected Operational Regime Using EMC3-EIRENE

**Heinke Frerichs**

**Kleines Forum**

2.071 Recent improvements in EMC3-EIRENE modeling for divertor detachment in burning plasmas

**Hiroyuki Takahashi**

**Kleines Forum**

2.072 Collisional-radiative analysis of atomic and molecular hydrogen emissions for electron density and electron temperature diagnostics

**Kevin Andrea Siever**

**Kleines Forum**

2.075 Comparison of experimental impurity radiation dynamics in the scrape-off layer of W7-X with EMC3-EIRENE simulations.

- Chanyeong Lee** **Kleines Forum**  
2.076 Surrogate boundary model development for KSTAR tungsten divertor operation based on SOLPS-ITER simulations
- Roland Friedl** **Kleines Forum**  
2.077 Intensity-calibrated VUV spectroscopy at UPP in attached and detached hydrogen and deuterium plasmas
- Kaushlender Singh** **Kleines Forum**  
2.078 Quantification of SOL filamentary transport and parametric dependencies across different regimes in TCV.
- Sean Ballinger** **Kleines Forum**  
2.079 Reconstructing the separatrix density in SPARC for pulse planning and control
- Daniil Ryndyk** **Kleines Forum**  
2.081 EMC3-EIRENE predictions of radiative detachment scenarios in W7-X equipped with a tungsten based divertor
- Shogo Otsuka** **Kleines Forum**  
2.082 Impact of radiation trapping effect with spatial distribution on He I line intensity ratio method in the study on detached divertor plasma
- Paolo Innocente** **Kleines Forum**  
2.083 Edge modelling of low and high radiative partially detached JET high power plasmas in the ITER-like configuration
- Shweta Soni** **Kleines Forum**  
2.093 Investigation of Deuterium Retention in Fe–Zr/Y Multilayers Using Femtosecond Laser-Induced Mass Spectrometry
- Shigetaka Kagaya** **Kleines Forum**  
2.119 Development of Retarding Field Analyzer for Spatial Distribution Measurements of Ion and Electron Temperature in Recombining Plasma
- Jonathan Van Blaricum** **Forum 8**  
2.017 EMC3-Eirene simulations of first wall heat and particle loads in ITER Start of Research Operation scenarios
- Luca Scotti** **Forum 8**  
2.018 Modelling of limiter load and its dependence on the wall clearance in Quasi-Continuous Exhaust regime in the ASDEX Upgrade tokamak
- Ayoub BENMOUMEN** **Forum 8**  
2.019 Quantifying nanobubbles in helium-plasma irradiated tungsten: Density and pressure estimation using TEM-EELS measurements
- Zeke Unterberg** **Forum 8**  
2.021 Design Considerations for Main Wall Plasma-facing Components in Magnetic-confinement Fusion Devices

- Audun Theodorsen** **Forum 8**  
2.022 Two-point model with filamentary transport
- Mark Cornelissen** **Forum 8**  
2.085 Multi-spectral coherence imaging to characterize the scrape-off layer flows in TCV and Magnum-PSI
- Tomás Sousa** **Forum 8**  
2.086 Influence of 3 T magnetic field on RF plasma self-bias and erosion pattern for the ITER Wide Angle Viewing System
- Laura Dittrich** **Forum 8**  
2.087 Spectral ellipsometry for in-vessel deposition measurements on plasma-facing components in Wendelstein 7-X
- Arseniy Kuzmin** **Forum 8**  
2.088 BH molecular emission in the divertor region of LHD: dependence on magnetic axis, plasma parameters, and multi-view spectroscopy
- Keisuke Fujii** **Forum 8**  
2.089 Poloidal flow measurement of impurity ions in DIII-D divertor
- Pavel Veis** **Forum 8**  
2.090 CF-LIBS Depth Profile Analysis of Inner Divertor from In-situ JET LIBS Robotic Arm measurements: Impact of Spectral Averaging on Depth Resolution and Quantification
- Shin Kajita** **Forum 8**  
2.091 Fine-Tuning of Machine Learning Diagnostics of Electron Density and Temperature from Helium Line Emissions
- Hirohiko Tanaka** **Forum 8**  
2.094 Wide-area spectroscopic observation and machine learning analysis of attached and detached helium plasmas
- Georg Schlisio** **Forum 8**  
2.095 Progress in high time and mass resolution mass spectrometry in Wendelstein 7-X
- Nina Mihajlov** **Kleines Forum**  
2.096 Results from the Hydrogen Absorption and Desorption Experiment in a Stellarator (HADES) Campaign in HIDRA
- Aaliyah Zuniga** **Kleines Forum**  
2.097 Qualification of Grain Oriented, Additively Manufactured Tungsten as a Plasma Facing Material
- Thomas Morgan** **Kleines Forum**  
2.099 Cyclical loading of different tungsten grades under COMPASS-U divertor conditions in Magnum-PSI
- Zhaofan Wang** **Kleines Forum**  
2.100 Molecular Dynamics Simulation of One-Dimensional Migration of  $1/2\langle 111 \rangle$  Dislocation Loops in Tungsten

- laura Laguardia** **Kleines Forum**  
2.101 Qualification of tungsten as plasma-facing components for COMPASS-U: Effects of laser and plasma damage on microstructure and deuterium retention
- Andrea Mastrogirolamo** **Kleines Forum**  
2.102 Integrated SOLPS-ITER and ERO2.0 modelling of helium–tungsten plasma–surface interaction for an H-mode ASDEX Upgrade discharge
- Haoxuan Yu** **Kleines Forum**  
2.103 Evidence of Helium Retention by Lithium Interaction in EAST
- MARIA MORBEY** **Kleines Forum**  
2.104 Dynamics of hydrogen isotope exchange in co-deposited LiD layers using operando ion beam
- Rahul Rayaprolu** **Kleines Forum**  
2.105 Characterisation of steady state plasma at the linear plasma device – JULE PSI
- Gregory Sinclair** **Kleines Forum**  
2.106 Centralized database on integrated testing of advanced materials in the DIII-D tokamak
- Udo von Toussaint** **Kleines Forum**  
2.107 Improved modelling and sampling of particles reflected from non-planar surfaces
- Masayuki Tokitani** **Kleines Forum**  
2.108 Development of combined joint method for W/RAFM steel with copper intermediate layer
- Chao Yin** **Kleines Forum**  
2.109 Recrystallization Kinetics of Tungsten Under Fusion-Related Conditions: Possible Pathways to Enhanced Microstructure Stability
- Hanns Gietl** **Kleines Forum**  
2.110 Microstructural and mechanical property characterization of tungsten fiber-reinforced copper alloys
- Alessio Villa** **Kleines Forum**  
2.111 A Systematic Analysis of Runaway Electron Energy Deposition in Plasma-Facing Components
- Simon Corah** **Kleines Forum**  
2.112 INVESTIGATING THE INFLUENCE OF DOPING AND ADDITIVE MANUFACTURING TECHNIQUES ON THE PLASMA MATERIAL INTERACTION RESPONSE OF TUNGSTEN
- Bianca De Martino** **Kleines Forum**  
2.113 Controlled Exposure of High-Temperature Ceramics in the Scrape-Off Layer of WEST
- Emna Frikha** **Kleines Forum**  
2.115 Modelling the Roles of Dislocations and Coalescence on the Nucleation and Growth of Helium Bubbles in Tungsten

**Selanna Roccella**

**Kleines Forum**

2.116 DTT divertor Qualification activities: assessment of W/Cu Joining Technologies for Flat Tile end of the Central Target

**Kenta Kawashimo**

**Kleines Forum**

2.117 Surface Morphology and Composition Changes of Additive Manufactured W Components Exposed to Liquid Li or Stellarator Plasma

# PSI27 – Regensburg

## Poster Sessions

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### Thursday, May 21 2026 – Poster Session 3

- Žana Popović** **Forum 9**  
3.025 High heat flux exposure of advanced tungsten composites and chromium in the DIII-D divertor under Fusion Pilot Plant-relevant conditions
- Yevhen Zayachuk** **Forum 9**  
3.027 Microscopy study of plasma- and laser-induced effects in tungsten components exposed to helium and hydrogenic plasmas in JET
- Ladislav Vignitchouk** **Forum 9**  
3.029 Simulations of tungsten gap bridging under ITER-like disruption conditions
- Shaun Haskey** **Forum 9**  
3.030 Experimentally constrained modeling of the energy spectrum and impact angle distribution of wall impacting neutrals and their role in main-chamber erosion
- Estelle ROMULUS** **Forum 9**  
3.031 FIRST SPECTRUM OF TUNGSTEN' EMISSIVITY AFTER EXPOSITION IN THE WEST TOKAMAK
- Hugo Bufferand** **Forum 9**  
3.033 Investigation of Lithium sources and transport with flowing liquid metal plasma facing components
- Corneliu Porosnicu** **Forum 9**  
3.034 Boron–Tungsten Coatings for Fusion-Relevant Studies: Plasma Parameters versus Film Properties
- Francesco Cani** **Forum 9**  
3.035 Interpretative and predictive analysis of impurity migration in GyM and BiGyM through ERO2.0 Monte Carlo transport code
- Cas Robben** **Forum 9**  
3.118 Plasma-Assisted Growth and Stability of Thick Boron Layers on Tungsten Under Fusion-Relevant Conditions
- Steven Thériault** **Kleines Forum**  
3.039 Deuterium Retention in Tungsten After Deuterium-Nitrogen Co-bombardment
- Olga Ogorodnikova** **Kleines Forum**  
3.040 Deuterium retention in radiation- and plasma- induced defects and co-deposited layers in W and W-Cr-Y alloy
- Dazheng Li** **Kleines Forum**  
3.042 Scaling Laws and Application of a Neutral Gas Evaporation Shielding (NGES) Model in HL-2A Pellet Injection Experiments

- Joey Demiane** **Kleines Forum**  
3.043 Dynamics of Deuterium Retention in Boron Thin Films on Tungsten During High-Flux Plasma Exposures in DIONISOS
- Kentaro Masuta** **Kleines Forum**  
3.044 Plasma-Driven Hydrogen Permeation Properties of Tungsten Deposited Films Fabricated by Argon Plasma
- Minyou Ye** **Kleines Forum**  
3.045 Damage induced by low-energy plasma and MeV ions and its effect on deuterium permeation and retention in tungsten-based materials
- Zhe Liu** **Kleines Forum**  
3.046 The effect of high-energy proton irradiation on deuterium permeation and retention in tungsten-based materials
- Sabina Markelj** **Kleines Forum**  
3.047 The effect of surface-near helium on deuterium retention in tungsten and EUROFER
- Jonathan DUFOUR** **Kleines Forum**  
3.048 Modelling of Hydrogen Isotopes Exchange in Self-Damaged Tungsten
- Thomas Schwarz-Selinger** **Kleines Forum**  
3.049 Irradiation damaging of EUROFER97 to very large damage doses: lattice strain and deuterium retention
- Sergei Krasheninnikov** **Kleines Forum**  
3.050 Mesoscale structures and anomalous transport driven by the RDW turbulence
- Jae-in Song** **Kleines Forum**  
3.052 Divertor Fuel Injection System for Detachment Experiments in KSTAR
- June-Woo Juhn** **Kleines Forum**  
3.053 Density Limits on the KSTAR Plasmas
- Sebastian Rode** **Kleines Forum**  
3.054 Retention modelling for stellarator reactor design based on W7-X
- zeshi gao** **Kleines Forum**  
3.055 Hydrogen isotope permeation and retention in pure and dispersion-strengthened tungsten: from pristine microstructures to helium-induced fuzz surfaces
- Bianca Solomonea** **Kleines Forum**  
3.056 Theoretical modeling of hydrogen transport in boron structures
- Yuri IGITKHANOV** **Kleines Forum**  
3.058 Plasma Fueling and Particle Exhaust Control in a fusion power reactor
- Suguru Masuzaki** **Forum 8**  
3.062 Impact of impurity powder injection on the first wall material transport in LHD

- Raymond Diab** **Forum 8**  
3.063 Experimental and Numerical Characterization of ICRF-Induced Plasma-Wall Interaction in the Regime of Propagative Slow Waves
- Riccardo Ian Morgan** **Forum 8**  
3.064 Influence of impurity injection location on tokamak plasma performance
- Naren Varadarajan** **Forum 8**  
3.065 Integrated Core-Edge Modelling of Tungsten Using SOLEDGE-3X and Application to WEST Experiment
- Alexis Huart** **Forum 8**  
3.066 Erosion and deposition patterns on ITER-grade actively-cooled divertor in WEST high-fluence campaign: analysis and comparison with SOLEDGE3X and ERO2.0 modeling results
- Timo Dittmar** **Forum 8**  
3.067 A  $^{15}\text{N}$  tracer injection experiment to study long range impurity transport in W7-X
- Zhuang Liu** **Forum 8**  
3.068 Investigations of impurities and pellet injection in EAST and HL-3 tokamaks
- Tian Xie** **Forum 8**  
3.070 Influence of nitrogen recycling on toroidally asymmetric heat load on CFETR X-divertor with EMC3-EIRENE modelling
- Juhyeok Jang** **Forum 8**  
3.072 Tungsten Impurity Effects on Effective Charge and Radiation Fraction in KSTAR Plasmas
- Atsushi Okamoto** **Forum 8**  
3.076 Initial experiment of an internal coil device for impurity transport study
- Liang Liu** **Forum 8**  
3.077 INVESTIGATION OF PLASMA-WALL INTERACTION AND IMPURITY TRANSPORT BEHAVIORS OF HL-3 PLASMAS
- Romain Avril** **Forum 8**  
3.119 Lithium impurity transport in fusion devices
- Holger Reimerdes** **Forum 7**  
3.101 Assessing the tightly baffled long-legged divertor (TBLLD) concept in TCV
- Jack Lovell** **Forum 7**  
3.102 Development and exhaust performance of the X divertor on MAST Upgrade
- Stijn Kobussen** **Forum 7**  
3.103 Towards dynamical system identification simulations using multisine perturbations for MAST-U with SOLPS-ITER
- Felix Albrecht** **Forum 7**  
3.104 First L-Mode experiments in Alternative Divertor Configurations in ASDEX Upgrade

- Martim Zurita** **Forum 7**  
3.106 Avoidance of large ELMs through impurity seeding
- Sid Leigh** **Forum 7**  
3.107 Modelling kinetic electron effects for transient heat-loads in the detached MAST-Upgrade Super-X divertor
- Juuso Karhunen** **Forum 7**  
3.108 Introduction of cross-field drifts in SOLPS-ITER simulations of STEP with fully tracked Ar impurities
- Koyo Munechika** **Forum 7**  
3.109 3D Synthetic Bolometry and Radiation Asymmetry Analysis for ITER SPI-Mitigated Disruptions
- Fabian Solfronk** **Forum 7**  
3.110 Development and validation of an XPR model in the ASDEX Upgrade flight simulator integrated modelling framework
- Andreas Redl** **Forum 7**  
3.111 Preparation of Boundary Digital twin for SPARC boundary physics operations
- Anastasios Tsikouras** **Forum 7**  
3.112 Control of the radiated power using bolometers and the impact of observed asymmetries on the radiated power proxy in Wendelstein 7-X
- Eva Havlickova** **Forum 7**  
3.115 The importance of drifts and radial transport assumptions in 2D modelling of the access to detachment and XPR in WEST
- Amit Kohinoor Kharwandikar** **Forum 7**  
3.116 Characterizing SOL Heat Transport in Wendelstein 7-X with SMoLID
- Aaro Järvinen** **Forum 7**  
3.117 Revisiting the ITER  $Q_{\text{DT}} = 10$  SOLPS-4.3 database with SOLPS-ITER with drifts and currents
- Sven Wiesen** **Kleines Forum**  
3.080 Rapid exhaust operational space studies employing AI workflows: the low-aspect ratio EU-DEMO as a use case
- Charles Hirst** **Kleines Forum**  
3.081 Evaluation of Additively Manufactured Tungsten and Cold Spray Tantalum Coating Performance through DiMES Plasma Exposures at DIII-D
- Annemarie Kärcher** **Kleines Forum**  
3.082 Experimental investigation on the flux-dependence of He clustering in polycrystalline and single-crystalline W
- Kelly Garcia** **Kleines Forum**  
3.083 Reactor-Scale Island Divertor Simulations of W7-X-like Configurations

- Weixi Chen** **Kleines Forum**  
3.084 Numerical study on surface heat load and erosion for limiter design in JA DEMO
- Marcos Navarro** **Kleines Forum**  
3.085 Detachment via Impurity Seeding, Heat Exhaust and Erosion in DIII-D in 3D Fields
- Dylan Kohler** **Kleines Forum**  
3.086 Performance Analysis of Additively Manufactured Tungsten through L-mode and H-mode DiMES Plasma Exposures at DIII-D
- Zongxiao Guo** **Kleines Forum**  
3.087 A Systematic Study on Detonation-Sprayed Tungsten/Steel First Wall Structures: From Process Development to Performance Evaluation
- Derek Harting** **Kleines Forum**  
3.088 Application of the kinetic ion transport model EMC3-EIRENE- KIT for W transport in full-3D wide-grid H-mode scenarios for the ITER SRO and DT-1 phases
- Marlene Patino** **Kleines Forum**  
3.090 The impact of concurrent displacement damage on retention for high-flux D2-10%He plasma-exposed tungsten
- Hans Maier** **Kleines Forum**  
3.091 Development and High Heat Flux Testing of Cold Sprayed Tungsten-based Coatings for the ITER Temporary First Wall
- Yuta KINASHI** **Kleines Forum**  
3.092 Plasma Flow Measurements for Investigating Impurity Transport in the Helicon-Based PMI Device PISCES-RF
- Jeremy Lore** **Kleines Forum**  
3.093 Integrated modeling of open-surface liquid metal divertors
- Matthieu Spinosi** **Kleines Forum**  
3.094 Optimization of Additive Manufactured Tungsten Lattice Structures for Liquid Metal Infiltration in Plasma-Facing Components
- Nobuyuki Asakura** **Kleines Forum**  
3.095 SONIC simulation studies of neutral-neutral collision and extended thermal force, and effects on JA DEMO detached divertor and impurity control
- Daniel Alegre Castro** **Kleines Forum**  
3.096 Simulation of disruptions and small-ELMs regimes by a CW laser over different advanced tungsten materials at the OLMAT high heat flux facility
- Marianne Richou** **Kleines Forum**  
3.097 Testing of VPS and PVD Tungsten Coatings on Steel in WEST for the ITER Temporary First Wall
- Vlad Soukhanovskii** **Kleines Forum**  
3.098 Investigating Divertor and PFC Safety Limits for Planned NSTX-U Experiments Using UEDGE

**Erik Wüst**

**Kleines Forum**

3.099 Influence of inter-pulse delay in double-pulse laser-induced breakdown spectroscopy on the detection of implanted deuterium in tungsten

**Zori Harutyunyan**

**Kleines Forum**

3.100 Boron-Enhanced W–Ta–V–Cr–Ti High-Entropy Alloys as Advanced Plasma-Facing Materials for Fusion Reactors

# PSI27 – Regensburg

## Poster Sessions

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### Friday, May 22 2026 – Poster Session 4

- Yuchen Xu** **Kleines Forum**  
4.009 Simulation study of the influence on pedestal instabilities due to impurities seeded by supersonic molecular beam injection
- Jiafeng He** **Kleines Forum**  
4.010 Development of the three-dimensional simulation of scrape-off layer plasma transport code using finite volume method
- Xavier Bonnin** **Kleines Forum**  
4.012 SOLPS-ITER as open-source software
- Tsunehiro Morita** **Kleines Forum**  
4.014 Feasibility study of the hydrogen recombination front measurement by analyzing the Zeeman effect on the chord-integrated Ar I line spectrum at 912 and 965 nm in JT-60SA
- Satoshi TAKAHASHI** **Kleines Forum**  
4.015 Electron density re-increase associated with a recombination-process transition during neutral gas injection in a GAMMA 10/PDX divertor simulated plasma
- Kerry Lawson** **Kleines Forum**  
4.016 Impact of the Lyman alpha discrepancy on He EDGE2D-EIRENE simulations
- Nassim Maaziz** **Kleines Forum**  
4.017 Describing the island divertor physics via simplified models
- Akira TONEGAWA** **Kleines Forum**  
4.018 Effect of magnetic field gradient on detached plasma formation in a linear divertor simulator TPDsheet-ICR
- Vsevolod Soukhanovskii** **Kleines Forum**  
4.019 UEDGE simulations with drifts of snowflake divertor experiments at MAST-U
- Wouter Dekeyser** **Kleines Forum**  
4.020 Analysis and validation of k-model for anomalous transport with data from the TCV-X23 discharge
- Sander van den Kerkhof** **Kleines Forum**  
4.115 Automated divertor target shape optimization using SOLPS-ITER and GOAT
- Naomichi Ezumi** **Kleines Forum**  
4.022 Influence of Near-Surface Reactions of Small-Angle V-Shaped Target on Detached Plasma Formation in the GAMMA 10/PDX Divertor Simulation Module
- Tanmay Macwan** **Kleines Forum**

4.024 Filamentary transport in small-ELM regime with conventional and snowflake divertor configurations in MAST-U tokamak

**Dirk Wunderlich**

**Kleines Forum**

4.026 Revisited reaction probabilities for atomic and molecular hydrogen for modelling cold divertor plasmas

**Jerome Moritz**

**Kleines Forum**

4.027 Sheath-driven redeposition of sputtered and evaporated impurities in Liquid Metal based plasma-facing components

**Richard Christian Bergmayr**

**Kleines Forum**

4.028 About the relevance of molecular processes in divertor plasmas: Which processes determine  $T_{\text{vib}}$  at Magnum-PSI?

**Floris Scharmer**

**Kleines Forum**

4.030 Asymmetric island localized profile shifts and their implications for scrape-off layer diagnostic comparability in Wendelstein 7-X

**Rick van Schaik**

**Kleines Forum**

4.031 First Integration of SOLPS-NN into JINTRAC for Fast Core-Edge Tokamak Simulations

**Yinghan Wang**

**Kleines Forum**

4.032 2D Boundary Fluctuation Characterisation in TCV X-point Radiator Plasmas

**Maxim Umansky**

**Kleines Forum**

4.036 Investigation of Machine Learning based neutral transport model in UEDGE

**Kota TAKEDA**

**Kleines Forum**

4.037 Observation of the Recombination Front Position and Its Movement in the Linear ECR Plasma Device NUMBER

**Kwan Chul Lee**

**Kleines Forum**

4.039 The Importance of Plasma-Neutral Interaction; Er formation, H-mode transition, and Intrinsic Rotation from arc discharge to tokamaks and space plasmas

**Sergei Makarov**

**Kleines Forum**

4.044 Improved Density Build-Up in Stellarator Island Divertors

**Abdourahmane Diaw**

**Kleines Forum**

4.045 Inline Deep Surrogates for Accelerating SOLPS-ITER Simulations

**George Wilkie**

**Kleines Forum**

4.046 Neutral transport surrogate model development for coupling to plasma simulation

**Robert James Davies**

**Kleines Forum**

4.047 Optimising the island divertor for a stellarator power plant: resilience of magnetic structures and coil optimisation

**Eunnam Bang**

**Kleines Forum**

4.048 Upgrade of voltage sweeping system for Langmuir probe to measure  $n_e$ ,  $T_e$  profile in the tungsten divertor region on KSTAR

- Kay Schutjes** **Kleines Forum**  
4.049 Investigating the Sensitivity of CARS Diagnostics for Measuring Rovibrational Populations of Hydrogen in Divertor-relevant Plasmas
- Annika Lisa Stier** **Kleines Forum**  
4.050 Assessment of the fluid transport model for neutral atoms in Hermes-3 in non-axisymmetric geometries
- David Coster** **Kleines Forum**  
4.051 Implementation of core-edge coupling using ETS-PAF and SOLPS-ITER
- Elias Waagaard** **Kleines Forum**  
4.052 Towards Divertor and Heat Exhaust Modelling for Quasi-Isodynamic Stellarators with JOREK
- David Bold** **Kleines Forum**  
4.053 Global Fluid Simulations in the W7-X Divertor: Development and Initial Benchmarking
- Jonathan Roeltgen** **Kleines Forum**  
4.054 Coupling of the neutral code Eirene and the gyrokinetic code GENE-X.
- Hoiyun Jeong** **Kleines Forum**  
4.055 Experimental Determination of Diffusion Coefficients near a Magnetic X-Point in a Partially Ionized, Partially Magnetized Plasma
- Bridget McGibbon** **Kleines Forum**  
4.056 Progress in edge turbulence modelling with self-consistent neutrals in SOLEDGE3X
- Kateřina Hromasová** **Forum 7**  
4.057 Predictive SOLPS-ITER simulations of tokamak COMPASS Upgrade: progress from structured grids to Wide Grids
- Jack Flanagan** **Forum 7**  
4.058 Buffering of transients via fuelling and impurity seeding in a detached MAST-U Super-X divertor
- Fabio Federici** **Forum 7**  
4.059 Impact of inner leg total flux compression on divertor detachment in MAST-Upgrade
- Joseph Bryant** **Forum 7**  
4.060 Preliminary X-Point Radiator Experiments on ST40
- Giulio Rubino** **Forum 7**  
4.061 Assessment of the H-mode DTT Scenario A in partially detached divertor conditions
- Reina Miyauchi** **Forum 7**  
4.062 Development of a Large-Diameter High-Density Hydrogen Plasma Source and Initial Heat-Flux Measurements in Pilot GAMMA PDX-SC
- J. L. Baker** **Forum 7**  
4.064 The effect of fluid neutral momentum on 1D detachment burn-through for STEP

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<b>Eric Emdee</b> 4.067 Lithium Vapor Cave Performance Uncertainty Due to SOL Cross-Field Transport and Deuterium Recycling Variations	<b>Forum 7</b>
<b>Matthias Bernert</b> 4.068 The X-Point radiating regime at JET with mixed impurities	<b>Forum 7</b>
<b>Kenneth Lee</b> 4.069 Detachment of high power discharges in TCV X-point target divertor	<b>Forum 7</b>
<b>Margaret Porcelli</b> 4.070 SOLEDGE3X Predictions for Initial Lithium Vapor Cave Divertor Experiments on NSTX-U	<b>Forum 7</b>
<b>Francesca Zarotti</b> 4.071 Optimization of the DTT Inner Limiter Through PFCflux Heat Load Simulations	<b>Forum 7</b>
<b>Máté Szűcs</b> 4.073 Validation of nitrogen-seeded XPR simulations and comparison with other impurities on ASDEX Upgrade using JOREK	<b>Forum 7</b>
<b>Yu-Chih Liang</b> 4.074 JOREK simulations on the X-point radiator formation and its movement in ASDEX Upgrade	<b>Forum 7</b>
<b>Morgan Shafer</b> 4.075 Radiation Dependence on Divertor Leg Length in Detachment on DIII-D	<b>Forum 7</b>
<b>Matteo Maria Robaldo</b> 4.076 Heat load assessment on European low-aspect ratio DEMO (DEMO-LAR) first wall	<b>Forum 7</b>
<b>Mate Karacsonyi</b> 4.077 Reduced boundary models for the ITER Pulse Design Simulator	<b>Forum 7</b>
<b>Stefan Dasbach</b> 4.078 Neural Network Prediction of Scrape-Off Layer and Divertor Physics for SPARC	<b>Forum 7</b>
<b>Dominik Brida</b> 4.080 Characterizing Attached Alternative Divertor Configurations in Deuterium and Hydrogen on ASDEX Upgrade	<b>Forum 7</b>
<b>Rebecca Masline</b> 4.081 Influence of target chamber geometry on impurity dynamics and neutral pressure in ARC-class divertor legs	<b>Forum 7</b>
<b>Kevin Verhaegh</b> 4.082 Divertor shaping as a continuum strategy for tackling power exhaust	<b>Forum 7</b>

- Menglong Zhao** **Forum 7**  
4.084 Neutral Transport in the Vacuum Region and Its Impact on Detachment Physics
- Hailong Du** **Forum 7**  
4.086 Simulation study of SF- divertor particle dispersion and detachment in HL-3 by SOLPS-ITER
- Daniël Maris** **Forum 7**  
4.089 JOREK transient detachment simulations with kinetic neutral collisions: initial results for ASDEX Upgrade
- Tom Looby** **Forum 7**  
4.090 Summary of Boundary Physics Work at CFS in Support of SPARC Operations
- Christian Avanzato** **Forum 7**  
4.091 Assessment of power exhaust capabilities on the academic tokamak TRUST with the SOLPS-ITER code package
- Ivo Classen** **Forum 8**  
4.092 TALIF on Magnum-PSI to characterize ground state atomic hydrogen in detached conditions
- Laurent Marot** **Forum 8**  
4.093 Removal of Boron Mixed Contaminant Films on Platinum Mirror
- Gennady Sergienko** **Forum 8**  
4.094 Calibration of LIBS diagnostics operated on remote handling arm in JET
- Jun Ren** **Forum 8**  
4.095 Direct measurement of heat flux deposition on the first wall from neutral beam shine-through in DIII-D tokamak
- Jari Likonen** **Forum 8**  
4.096 Ex-situ analysis of JET plasma-facing components using laser induced breakdown spectroscopy in support of post-DTE3 in-situ measurements
- K. E. Ramachandran** **Forum 8**  
4.097 Depth-Resolved ps-LIBS Characterization of Boron/Deuterium and Deuterium- Loaded Boron Coatings for Fusion Plasma-Facing Applications
- Adam McLean** **Forum 8**  
4.098 The case for multiband infrared imaging in fusion devices
- Alex Klasing** **Forum 8**  
4.099 A versatile Langmuir probe for measuring the edge structure of HSX
- Peeter Paris** **Forum 8**  
4.103 In-situ LIBS measurements of fuel retention and deposit formation on inner wall guard limiter tiles by JET LIBS remote handling arm system

- Christine Stollberg** **Forum 8**  
4.104 LCIF Diagnostics on RAID for Validation of Collisional-Radiative Models in Tokamak Plasmas
- Dongcheol Seo** **Forum 8**  
4.105 Development of the D-alpha line measurement system for Tungsten Divertor in KSTAR
- Sanath Shetty** **Forum 8**  
4.107 Determining the stoichiometry of tungsten borides (WxBy) using LIBS extended to vacuum UV spectra range
- Lauren Nuckols** **Forum 8**  
4.108 Development and Heat Flux Testing of Actively Cooled, Long Pulse Sample Probe for the WEST Tokamak
- Alysée Khan** **Forum 8**  
4.110 Design of a Fast Reciprocating Diagnostic to characterize the plasma boundary in TCV
- C. Christopher Klepper** **Forum 8**  
4.111 Reactor-relevant sensing of enhanced PSI phenomena via the sub-divertor: an exploratory study
- Trenton Brewer** **Forum 8**  
4.112 Langmuir probe and infrared thermography measurements of wide and narrow heat flux profiles in the ST40 tokamak
- Kyu-Dong Lee** **Forum 8**  
4.113 Daily wall condition assessment using ECE measurements during KSTAR wall reference discharge
- Seungmin Bong** **Forum 8**  
4.114 Investigation of the noise crosstalk associated with bias-voltage swept KSTAR divertor Langmuir probes depending on the waveforms