

Poster prize zone: stands BO-001 – BO-027 — gold labels below

G. Plasma-Facing Components

BO-001	Eduard WARKENTIN	Investigation of the oxidation process in boron coatings
BO-002	Wang SHENGQING	LBM-based Simulation of Hydrogen Isotope Permeation and Retention in Fusion Reactor Structural Materials
BO-003	Gianluca CAMERA	Electromagnetic loads mapping through the SCILLA force density interpolative profiles
BO-028	Mikulas DUROVEC	Design challenges for the COMPASS Upgrade closed tungsten divertor
BO-029	Ondrej ŠTUKAVEC	Numerical simulation-driven development of the COMPASS Upgrade plasma-facing components
BO-030	Jiri MATEJICEK	Structured W-Cu composite as an alternative to tungsten for plasma-facing components
BO-031	María GONZÁLEZ VIADA	The technological impact of light ions impurities in the oriented microstructure of tungsten plasma-facing components
BO-032	Thomas FOX	Utilisation and Topology Optimisation of Tungsten Fibre-Reinforced Materials and Interfaces in Plasma-Facing Components
BO-033	Francesco CREA	Divertor PFUs with advanced-W plasma facing materials
BO-034	Mariano DI BARTOLOMEO	Development of an Ultrasonic Inspection for qualification and acceptance Criteria for Advanced Tungsten Plasma-Facing Units of the Wendelstein 7-X Divertor
BO-035	Maximilian BRADLER	Qualification of Additively Manufactured CuCr1Zr Heat Sinks for the Wendelstein 7-X Divertor
BO-036	Roman PETRAS	Study of compressive strength of additively manufactured tungsten-based materials for fusion applications
BO-037	Jee Soo SHIM	Effects of Compressive Residual Stress on Helium-Induced Sputtering in Tungsten Surface: a Molecular Dynamics Study
BO-038	Andrea CIULA	Towards Functionally Graded W-CuCrZr Cellular Heat Sinks for Plasma Facing Components: Residual Stress Analysis and Homogenization-Based Design
BO-039	Yiran MAO	Integrated Development of High-Temperature Heat Pipe-Based Plasma-Facing Components (HPPFC): Modeling, Fabrication and Experimental Validation
BO-040	Christophe GUILLEMAUT	High temperature irradiation of diamond and thermal conductivity measurements for applications in fusion plasma facing components
BO-041	Davide CAPRINI	Impact of twisted tape spacing on the thermal-hydraulic performance of ITER-like Plasma Facing Units
BO-042	Pietro MACCARI	Impact of the EUROfusion DEMO LAR Baseline on the WCLL Breeding Blanket Thermal-Hydraulic Performance
BO-043	Emanuela MARTELLI	Thermal-Hydraulic Analysis and Design Validation of the DTT Outer Target Test Frame
BO-044	Fabio CRESCENZI	Assessment of the DTT Plasma Facing Units under EM loads
BO-045	Mauricio GAGO	Bubble formation on tungsten-based alloys after exposure to fusion-relevant synergistic heat and plasma loads
BO-046	Gregor KOZMUS	Experimental Investigation of Flow Boiling in a Divertor Cooling Channel Mock-up Under Fusion-Relevant Heat Fluxes
BO-047	Muhammad Aghist FITRONY	CHF and Boiling HTC Enhancement in One-Sided Heated Cooling Channels Using Structured Inserts and Fin-Shaped for Fusion Divertor Applications
BO-048	Ahmet KILAVUZ	Modeling of Two-Phase Subcooled Flow Nucleate Boiling under Divertor Relevant Flow Conditions
BO-049	Shinji EBARA	Boiling Heat Transfer Experiment of a Spontaneous Swirling Flow downstream of a Dual-Elbow Piping for Fusion Divertor Cooling Development
BO-050	Christine KLEIN	Effects of the Streamwise Extent of Periodic Computational Domains for LES Simulations on Turbulent Flow and Heat Transfer of the AV2 Geometry in the HETREX-PT Experiment
BO-051	Rafael NIETO	A Computational Faceting Method for Optimised Discretisation of ITER First Wall Surfaces
BO-052	Manoj SUBRAMANI	STEP Fusion Power Plant First Wall Heat Load Challenges

BO-053	Michele FADONE	Glow Discharge cleaning efficiency analyses in view of RFX-mod2 operation
BO-054	Zhongwei WANG	Thermal and structural analyses of the Tungsten based divertor for Wendelstein 7-X
BO-055	Maria Lorena RICHIUSA	Off-normal transient effects on the structural integrity of the ITER inertial tungsten first wall
BO-056	Joe THICKETT	STEP Fusion Powerplant Off Normal Event Handling Impacts on PFCs
BO-057	Sungjin KWON	Overview of the Korean Strategic Research of Innovative Fusion Divertor for the Next-Step Fusion Device
BO-058	Markus GRASSER	Multi-objective optimization of the next-generation W7-X divertor
BO-059	Joris FELLINGER	Design and qualification of water-cooled W-based divertor for W7-X
BO-060	Jan HORACEK	Water-cooled STEAM heat shield against extreme steady plasma flux 80-160 MW/m ²
BO-061	Kil-Byoung CHAI	Upgrade of KAERI particle flux irradiation facility using in-vessel solenoid coils
BO-062	Christos TANTOS	3D Numerical Modelling of Particle Exhaust in the EU-DEMO LAR Divertor
BO-063	Francesca CAU	Analysis, Design and Testing of the JT-60 SA Tungsten Divertor
BO-064	Nikola JAKSIC	Crack investigation at the divertor tungsten tile using FEM
BO-065	Benedict SMITH	Design and Prototyping of a Liquid-Metal CPS Divertor Tile for COMPASS-U
BO-066	Sergey SMOLENTSEV	FILMS - Fully Integrated Liquid Metal System for a Fusion Reactor
BO-067	Syedmohammad VAFAEI	CFD Simulation of Liquid Metal Heat Pipes as Plasma-Facing Component for Fusion Applications
BO-068	Luca FERRANTE	Surface Engineering of Tungsten Capillary-Porous Systems for Liquid Metal Divertor Application
BO-069	Oliver BUXTON	Monoblock Surface Cracking: Impact of Divertor Topology on Plasma Heat Loading & Tungsten Evolution in WEST
BO-070	Selanna ROCCELLA	Experimental Assessment of Sweeping Effects on Divertor Targets with Tungsten Monoblock Design
BO-071	Patrick JUNGHANNS	Manufacturing and Quality Assessment of a Copper based Plasma-Grid for GLADIS
BO-072	Alberto AMBROGINI	Additive manufacturing of tailored W-CuCr1Zr interfaces by means of PBF-LB/M multi-material processing for plasma-facing component applications
BO-073	Martin MUSCAT	Nuclear fusion reactor benchmark models for testing post processing scripts that follow the elastic RCC-MRx structural integrity assessment rules
BO-074	Johannes KOOPMANN	Assessment of the influence of heating energy expansion on components in the plasma vessel at W7-X
BO-075	Andreas TISCHER	Development of a rapid and simple thermal calculation procedure for diagnostic and wall components in the W7-X plasma vessel for long-pulse operation
BO-076	Nathaniel SAURA	Thermal surrogate modelling for quasi real-time monitoring of actively cooled first wall components in ITER
BO-077	Bo CHEN	Progress in development and application of CFC based components for EXL-50U
BO-078	Samuel LAZERSON	Closed Island Divertor Concept and Directional Neutral Flow-Driven Pumping Strategy in the GIGA Stellarator Power Plant
BO-079	Gabriele GERVASINI	Modelling D/H pumping speed and outgassing after plasma discharges in WEST
BO-080	Sophie CARPENTIER-C HOUCHANA	Lessons learned from European ITER-like divertor components installed in the WEST tokamak
BO-081	Francesca SIGNORE	Enhanced Monte Carlo simulation of the W activation in the WEST tokamak due to runaway electrons impact of Plasma Facing Components
BO-082	Deepankara VRUSHABHADAS	A Physics-Informed Foundation for a Digital Twin of Hydrogen-Isotope Retention in Tungsten Plasma-Facing Components
BO-083	Daniel WILKINSON	Development and Testing of a Novel FAST-Diffusion Bonding Process for the Joining of Copper Chromium Zirconium Alloys to Tungsten for Plasma Facing Components

BO-084	Jiyoung JUNG	Manufacturing Process for Preventing Cutting Chip Ingress and Contamination in the Cooling Circuit of the ITER Shield Block
BO-085	Heiko NEUBERGER	Fusion relevant First Wall manufacturing by Electrical Discharge Machining and Cold Forming: a detailed status review and outlook on further development strategy
BO-086	Yurii KOVTUN	Investigation of glow discharge cleaning by cryogenic trap assisted mass spectrometry at Uragan-2M stellarator
BO-087	Eunnam BANG	Evaluation of the effect of accumulated HHF on tungsten divertor mock-up manufactured by casting and HRP method
BO-088	Matej TEKAVCIC	CFD Simulations of Boiling in Stagnant Regions of the DEMO Divertor Cassette Body
BO-089	Marco FULICI	Electromagnetic Model for the lower divertor of ASDEX Upgrade: how to improve the operational performance
BO-090	Joowon SUH	Irradiation-induced hardening and defect characterization in ARAA ferritic/martensitic steel

J. Materials Technology

BO-004	JunHui HAN	Helium-Induced Blistering and Subsurface Bubble Evolution in ITER-Grade and K-Doped Tungsten at Elevated Temperature
BO-005	Woohyun LIM	Influence of Surface Finish on Helium-Ion Blistering of ITER-Grade and K-Doped Tungsten at 700 °C
BO-006	Maria ORTIZ DE ZUNIGA	AI-Assisted Phased-Array Ultrasonic Testing (PAUT) Interpretation for Complex Austenitic Welds in ITER-Relevant Components
BO-007	Shurie MCMAHON	Assessing Fusion Performance Limits of Vanadium Alloy E-Beam Welds for Breeder Blanket Applications.
BO-008	Contreras Leon LUCAS	Radiation effects in reduced activation ferritic-martensitic (RAFM) steel welds for fusion first-wall/blanket applications
BO-009	Stylianios KYPRAIOS	Microstructure optimisation of additively manufactured V-4Cr-4Ti, for fusion first wall/blanket applications
BO-010	Adam JACKSON	Understanding mechanical properties of V-4Cr-4Ti alloys to Tungsten joints through Hot Isostatic Pressing for Fusion Plasma-Facing Applications
BO-011	David BERMUDEZ	Mechanical Properties of Structural Metallic Alloys for Nuclear Applications Deduced by Three-Point Bend Testing
BO-012	Min-Woo KANG	Microstructure and mechanical properties of the base metal and TIG weld of advanced reduced-activation alloy and the effect of Zr addition
BO-013	Sahil VALIYEV	Effect of Electron Beam Welding and Post-Weld Heat Treatment on the Mechanical and Microstructural Properties of Reference and Modified EUROFER97 Grades
BO-014	Feifan HE	Study on Microstructural Evolution and Strengthening Mechanisms in ODS-Cu Processed with Nano-WO ₃ -Assisted Mechanical Alloying
BO-015	Mohammed UMAR	Understanding low and intermediate temperature volumetric instabilities due to irradiation in Di-tungsten Penta-boride for Spherical Tokamak Centre Column shields.
BO-016	Michael WILLIAMS	Degradation of Tungsten Carbide Under Irradiation for Application in Spherical Tokamak Centre Column Shielding
BO-017	Leyla FRANZ	Corrosion Resistance and Applicability of EUROFER97 in Stagnant Lead-Based Breeding Blanket Environments for Fusion Reactors
BO-018	Kiwamu MOROIZUMI	Fabrication of TiO ₂ /TiN Dual-Layer Coatings Using Dielectric Barrier Discharge and Atomic Layer Deposition
BO-019	Zhang SIYU	Characterization of W/EUROFER functionally graded coatings for fusion applications
BO-020	Yuya ANDO	Deuterium permeation through liquid tin supported in metal mesh structures
BO-091	Maria URRESTIZALA	Critical review and rigorous experimental data analysis of hydrogen permeability in Eurofer-97
BO-092	Laura DITTRICH	A novel probe head for near-SOL material exposure experiments at Wendelstein 7-X

B. Experimental Devices and Facilities for Fusion Research

BO-021	Marta DAMIANO	Experimental characterization of the irradiation cavity of the GENeUSIS Neutron Assembly
BO-022	Gonzalo Manuel MARTÍN RODRÍGUEZ	⁶⁰ Co Irradiation Tests on Individual IFMIF-DONES STUMM Detectors
BO-023	Julijan PERIC	Water Activation Experiment in the JET DTE3 campaign: Recovery of Saturated Gamma Signals in Support of ITER
BO-024	Andrea ANTONIONE	Current status of the control system development for the ITER EC gyrotrons
BO-025	Kenta OHIRA	Development of Wire-Scanner Monitor for High-Current Beam Profile Measurements of Accelerator Based Fusion Neutron Sources.
BO-026	Samuele CASTEGNARO	Neutron studies on the building penetrations of the Divertor Tokamak Test (DTT) facility
BO-027	Hao XU	Overview on the Structural Design and Manufacturing of the ITER MCTB Cryostat
BO-093	Susan WRIGHT	Operating Experience from JET
BO-094	Hongjuan SUN	Integrated Commissioning of Fusion Facilities: Experience from JET and MAST-U
BO-095	Alessandra VANNONI	TRACE-Based Thermal-Hydraulic Model for coupling HELOKA-US and HELOKA-HP Facilities
BO-096	Simone NOCE	OSCAR-Fusion analysis of the first Copper dust campaign in the FNG ACP hydraulic loop
BO-097	Francesca Maria CASTROVINCI	Design of a WCLL Breeding Blanket First Wall test section to be tested in the Water Loop facility and integration in the W-HYDRA platform
BO-098	Marica EBOLI	Experimental Characterization of PbLi/Water Interaction in the LIFUS5/Mod3 Separate Effect Test Facility for Nuclear Fusion Applications
BO-099	Jimmy SCIONTI	The BiGyM Project: Status and Perspectives
BO-100	Daniele MARTELLI	Performance Evaluation of Hydrogen Isotope Permeation Sensors for Gas-Phase and Static LiPb in the TRI-PRISM Project
BO-101	Hiroki KAYANO	Design and operation of JT-60SA divertor gas-puffing system considering in-pipe gas flow
BO-102	Jacob JOHN	The FUSERO Program Advancing In-Pile Fusion Materials Testing Under Neutron Irradiation
BO-103	Charles EYRICH	The Lawson Machine 26 (LM26) Program: Fusion Technology Development and Operational Processes
BO-104	Myles HILDEBRAND	Lawson Machine 26 – Results from the large-scale Magnetized Target Fusion Demonstration
BO-105	Sergej GORDEEV	Fluid-Structural Analysis of IFMIF-DONES Li-Target Assembly
BO-106	Martin ANSORGE	Cyclotron-driven fast neutron sources at NPI CAS providing support irradiations for IFMIF-DONES preparatory activities
BO-107	Fabio MORO	The SORGENTINA-RF neutron source: nuclear analyses in support of its design development
BO-108	Christian BACHMANN	Design and technology of the Volumetric Neutron Source
BO-109	Arnold LUMSDAINE	Development of a Muon Catalyzed DT Neutron Source
BO-110	Björn BRENNEIS	Pre-conceptual design of the Compact Accelerator-driven Neutron Source Karlsruhe
BO-111	Luka SNOJ	Experimental Validation of Activated Water Source Terms at KATANA: Quantitative Comparison of Calculations and Measurements

Poster prize zone: stands S1-01 – S1-15 — gold labels below

E. Diagnostics

S1-01	Jack FLETCHER	Neutron Camera Response Prediction with CADIS in OpenMC
S1-02	Mark FORTUNA	Estimation of Uncertainty in the Line-of-Sight of the ITER In-Port Radial Neutron Camera due to Fission Chamber Isotopic Composition
S1-03	Edgard ZUIN	Design development and feasibility investigation for the MITICA diagnostic calorimeter
S1-04	Eleonora AGUS POLETTI	Rapid synthetic IR diagnostic for ITER first wall heat load control applications
S1-05	Deborah SELEMON	Progress Toward Real-Time Pulsed Reflectometry for Plasma Position Control on MAST-U
S1-16	Jarich KONING	Preliminary Design of the High Resolution Neutron Spectrometer for ITER
S1-17	Patrik OLLUS	Modelling neutron emission for the ITER High-Resolution Neutron Spectrometer
S1-18	Pavel TURJANICA	Spinel based 2D magnetics diagnostics sensors
S1-19	Slavomir ENTLER	Antimony Hall sensors with enhanced performance for fusion power reactors
S1-20	Heungsu KIM	Temperature Effects on Magnetic Measurements and Installation of hall Sensors in the KSTAR Tokamak
S1-21	Jun-Gyo BAK	Hall sensor measurement in the KSTAR tokamak
S1-22	Ondrej BARES	Combined sensor for COMPASS-U - validation of data fusion aspects
S1-23	Hans MEISTER	Final sensor design, layout and validation of the ITER diagnostic pressure gauges
S1-24	Daniel IGLESIAS	Final design of the ITER Tokamak Systems Monitor
S1-25	Teteny BAROSS	Updated Optical Box design for the Erosion Deposition Monitor
S1-26	Attila BOHM	Electromagnetic loads and resulted stresses on the Optical Box under ITER Divertor Dome designed for the Erosion Deposition Diagnostic System
S1-27	José MARTÍNEZ FERNÁNDEZ	Preliminary electromagnetic design of the Doppler Reflectometry system for the JT-60 tokamak
S1-28	Ryota MATOIKE	Development of a modular vacuum-ultraviolet spectrometer for JT-60SA
S1-29	Hiroto HOMMA	Design and Engineering of the Vacuum Boundary for Diagnostic Integration in JT-60SA
S1-30	Quentin POTIRON	Optimization of ITER In Vessel Neutron Diagnostic Calibration
S1-31	Silvia DI SARRA	Overview of ITER neutron diagnostic calibration strategy
S1-32	Antara MENZEL-BARBARA	Overview and calibration of definitive high-performance IR Divertor Thermography of Wendelstein 7-X Stellarator
S1-33	Luigi Emanuel DI GRAZIA	A Software Framework for Validation and Calibration of ITER Magnetic Diagnostics Based on Plasmaless Discharges
S1-34	David ANTHOINE	Innovative radiometric calibration solution for optical diagnostics in fusion plants
S1-35	Anna GLASSER	TWINTOK-IDA: An integrated validation and benchmarking digital twin framework
S1-36	Filipe DA SILVA	Towards a Digital Twin of the VOPOO Diagnostic: Implementation of a Synthetic Full-Wave Framework in REFMULF for Plasma Edge Analysis on SPEKTRE
S1-37	Tullio BARBUI	Design and synthetic diagnostic of a vertical multi-energy SXR camera on the WEST tokamak
S1-38	Enrico OCCHIUTO	Final Design of the ITER Radial Neutron Camera Ex-Port System
S1-39	Emilio BLANCO	Design status of the ITER Collective Thomson Scattering ex-vessel launcher transmission line
S1-40	Ivan DURAN	ITER Outer Vessel Steady-State (OVSS) magnetic field diagnostic system: current status, R&D; and production highlights, and lessons learned
S1-41	Dominik NAJMAN	Implementation of novel magnetic field sensors on COMPASS-U, DTT, and DEMO/VNS tokamaks
S1-42	Dariusz MORAWSKI	Magnetic shielding of the thin-foil proton recoil neutron spectrometer of ITER HRNS

S1-43	Andrea COLANGELI	Neutron measurements with SiC and Li-Glass detectors within the EUROfusion concrete shielding experiment at the Frascati Neutron Generator
S1-44	Luca WENINGER	Optical fiber-based monitoring of neutron transport in concrete within the EUROfusion concrete shielding experiment at the Frascati Neutron Generator

D. Plasma Engineering, Plasma Control, and CODAC

S1-06	Antonia FRANK	Physics-based real-time control of [neoclassical] tearing modes with co-MRE and TORBEAM at TCV
S1-07	Kazutoshi YASUI	Gain Tuning Based on Step Response for Multi-Variable PID Control of DEMO Plasma with Engineering Constraints
S1-08	Alberto BITTESNICH	Simulation of MHD plasma equilibria and evolutions by APEC-M code
S1-09	Masanori SATO	Reachability and Controllability Gramian Analysis of Coupled Electromagnetic-Thermal Plasma Profile Dynamics in a Port-Hamiltonian Framework
S1-10	Rin CHOI	Geometric Optimization and Vertical Stability Analysis of Negative Triangularity-based C-shaped Plasmas for Minimizing Bad-curvature Regions
S1-11	Chae-Beom LIM	Exploration of Operation Scenarios for Compact Pilot Device (CPD)
S1-12	Pasquale ZUMBOLO	Linearized MHD Plasma Response Model Using Finite Elements Approach for 3D Magnetic Control
S1-45	Mattia SCARPARI	Reduced Disruption Modelling Workflow for the Design of New Components in View of ST40 Upgrade
S1-46	Simon VAN MULDER	A kinetic equilibrium reconstruction workflow for ITER using model-based estimation of internal plasma profiles
S1-47	Joshua MITCHELL	Hybrid MPC-Optimisation Workflow for Long-Horizon RAPTOR Scenario Development
S1-48	Oliver BARDSLEY	Tokamak plasma initiation: a systematic, predictive approach to scenario design demonstrated on MAST-Upgrade
S1-49	Matthias GEHRING	Evaluating update paths for the input-output interface of the ASDEX Upgrade Discharge Control System
S1-50	Ivan WYSS	Simulating PID Control of the Total Radiation in the Perspective of Next Generation Tokamaks
S1-51	Shigetoshi NAKAMURA	Construction of JT-60SA massive gas injection system toward Operation phase 2
S1-52	Won-Ha KO	Toward ITER Operation: Recipes for Minimum Threshold Power H-Mode Access Without ELMs in KSTAR
S1-53	Gabriele FERRERO	Exploring passive disruption mitigation techniques in the ARC-class reactor: the Liquid Sandwich Vacuum Vessel.
S1-54	Feda ALMUHISEN	Plasma-AURA: A conversational AI tool for tokamak operational data analysis at WEST
S1-55	Alan PEACOCK	Post DTE2 Tritium clean up analysis and recommendations for clean-up post DTE3

Poster prize zone: stands S2-01 – S2-09 — gold labels below

A. Integrated Plant Systems and Pathways Toward Fusion Power Plants

S2-01	Eusebio Naif AL-SOLIMAN FUENTES	Enabling knowledge extraction and remote data analysis in large research facilities: a use case
S2-02	Daniela SURIANO	Thermal-Hydraulic Modeling and Preliminary Transient Performance Evaluation of the ITER IBED Cooling Loop
S2-03	Yunsung JUNG	Topology-Aware Modular Surrogate Modeling for Separation Process Networks
S2-10	Jean BOSCARY	Strategy for Considering Uncertainty in Design Process of Future Fusion Power Plant
S2-11	Jonathan MADDOCK	Uncertainty Quantification of Failure Severity for DEMO Using Interval Analysis
S2-12	Francesca Maria POLI	BRIDGE - a Multiscale and Multiphysics Approach to the Development of a High-Fidelity Physics Plasma Simulator for Burning Plasma
S2-13	Eric NARDON	Assessment of the design space for a high field negative triangularity burning plasma tokamak
S2-14	Arthur ANDRIEUX	SYCOMORE system code modernization and preliminary application to high field compact tokamaks
S2-15	Maya PADIVATTATHUMANA	Inboard Shield Blanket Options and Neutronic Analysis for Compact Fusion Pilot Plants
S2-16	Peter TITUS	PPPL Alternate Structural Studies of the Tokamak Energy ST-E1 Reactor
S2-17	Theo FONGHETTI	Disentangling the aspect ratio dependence of energy confinement time with multi-machine integrated modeling
S2-18	Jonathan TRIELOFF	A Surrogate Boundary Condition for Acceleration of Fusion Neutronics
S2-19	Beatrix FLUHRER	Experimental investigation of DEMO relevant HCPB ICD operating scenarios using the new HELOKA-US molten salt facility at KIT
S2-20	Luca SPINICCI	A validated fast predictive model for disruption heat loads and vapour shielding
S2-21	Sergio RAMIREZ MARTINEZ	Use of Divertor and other Heat Sources for Preheating and Reheating in A Rankine Cycle System
S2-22	Jedrzej WALKOWIAK	Systems analysis of reactor-scale stellarators with optimised plasma-coil spacing
S2-23	Jesus IZQUIERDO	ITER technical Baseline 2024: full implementation under configuration control