



# WP PWIE SP B.4 kick-off meeting

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# Goals and agenda of the meeting



## The goals of the meeting are to

- Introduce and discuss the tasks attached to each Research Unit under SP B.4,
- Identify possible gaps and opportunities for collaboration, and
- Decide on concrete next steps, to be reviewed in the autumn

09:00 Introduction to PWIE and SP B

09:15 Presentations of SP B.4 task holders – please focus on the question “What will be done in 2021 and what is needed from others/EUROfusion”  
Please be brief: each presentation is 8 min + 2 min for quick feedback

10:45 Discussion

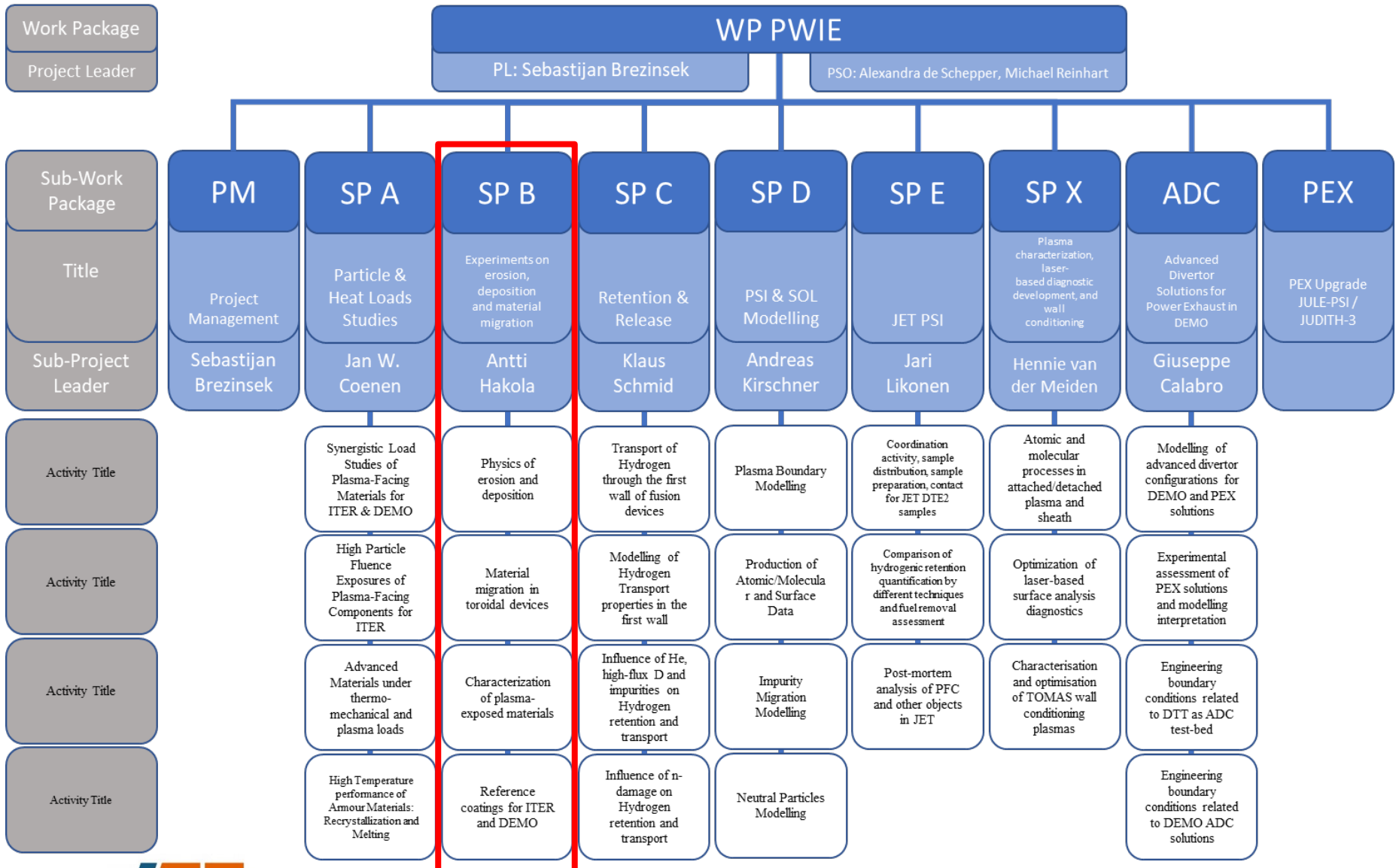
11:10 End of the meeting

<https://indico.euro-fusion.org/event/1160/>

In this meeting we'll discuss **production and characterization of reference layers for ITER and DEMO**. Modelling efforts are channelled under SP D.

**Everybody is invited to contribute to the discussions, also those who are not task holders of any of the SP B.4!**

# Structure of PWIE and SP B



# SP B focus points in 2021



I: Experimental determination of effective tungsten sputtering yields on different types of rough surfaces in pure and mixed plasmas and comparison with laboratory experiments (ITER+DEMO) → SP B.1, SP B.2, SP B.4

II: Provision of the gross and net erosion balance of W PFCs in L- and H-mode plasmas in tokamaks with the aid of marker probes (ITER) → SP B.2, SP B.3

III: Completion of surface analyses of W marker tiles exposed in the deuterium campaign C3, first assessment of the erosion/deposition balance on W PFUs in WEST after the He campaign → SP B.2, SP B.3

IV: Production of reference layers for the benefit of SP B and other subprojects → SP B.4

# 2021 Deliverables SP B.4



Deliverable ID:	Deliverable Title:
D001	W-based coatings with pre-defined properties (incl. SEM, AFM, TDS characterization) produced for analyses and plasma experiments (ENEA)
D002	Be and W-based coatings with pre-defined properties (incl. SEM, XRD, GDOES, TDS characterization) produced for analyses and plasma experiments (IAP)
D003	Raman, SEM, and CLSM characterization of selected Be and W reference samples (CEA)
D004	SEM and SIMS characterization of selected W reference samples (CIEMAT)
D005	RBS and NRA characterization of selected Be and W reference samples (IST)
D006	TDS, XPS, and XRD characterization of selected Be and W reference samples (JSI)
D007	ERDA and PIXE characterization of selected Be and W reference samples (RBI)
D008	RBS, NRA, ERDA, LIBS, and SIMS characterization of selected Be and W reference samples (VTT)

# 2021 Resources SP B.4



Deliverable Owner	Beneficiary	PM
C. Pardanaud	CEA	2
D. Alegre	CIEMAT	3
M. Passoni	ENEA	3
C. Porosnicu	IAP	9
E. Alves	IST	2
V. Nemanic	JSI	3
I. Bogdanovic Radovic	RBI	2
A. Hakola	VTT	2
<b>Total</b>		<b>25</b>

Device	Beneficiary	Days	Related Deliverable
Accelerator	IST	5	D005
Accelerator	RBI	5	D007
Accelerator	VTT	1	D008



1. Production and characterization of **W reference coatings, multilayer structures, and proxies for re-deposited layers** with varying composition, morphology, and grain structure (ENEA)
2. Production and characterization of **Be reference coatings** with varying composition, morphology, and grain structure (IAP)
3. Production and characterization of **W reference coatings and proxies for re-deposited layers** with varying composition, morphology, and grain structure (IAP)
4. Chemical and microstructural characterization of the produced Be and W reference layers (CEA)
5. Compositional and microstructural characterization of the produced W reference layers (CIEMAT)
6. Compositional characterization of the produced Be and W reference layers (IST)
7. Identifying fuel-retention properties of the produced Be and W reference layers (JSI)
8. Compositional characterization (broad-beam and microbeam) of the produced Be and W reference layers (RBI)
9. Identifying elemental composition at different depths throughout the produced Be and W reference layers (VTT)

# Contact info and next steps



- Your SP B contact  
Antti Hakola ([antti.hakola@vtt.fi](mailto:antti.hakola@vtt.fi))
- Project leader  
Sebastijan Brezinsek ([s.brezinsek@fz-juelich.de](mailto:s.brezinsek@fz-juelich.de))
- Project Support Officer  
Michael Reinhart ([m.reinhart@fz-juelich.de](mailto:m.reinhart@fz-juelich.de))
- PMU Coordination Officer – starting in late 2021  
David Douai ([david.douai@cea.fr](mailto:david.douai@cea.fr))

- ✓ Approval of the Project Execution Plan (PEP)  
**Mid- till end of June**
- ✓ Refining task descriptions, in separate meetings or by email  
**From June till mid-July**
- ✓ Intermediate report and midterm meeting - **October**
- ✓ Annual meeting and report on Deliverables – **TBD**

Minutes and slides of the meeting at

<https://indico.euro-fusion.org/event/1160/>