WP PWIE SP B.4 kick-off meeting
VTT tasks

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Relevant tasks and deliverables from the PEP

Under SP B.4

D008: RBS, NRA, ERDA, LIBS, and SIMS characterization of selected Be and W reference samples (VTT)

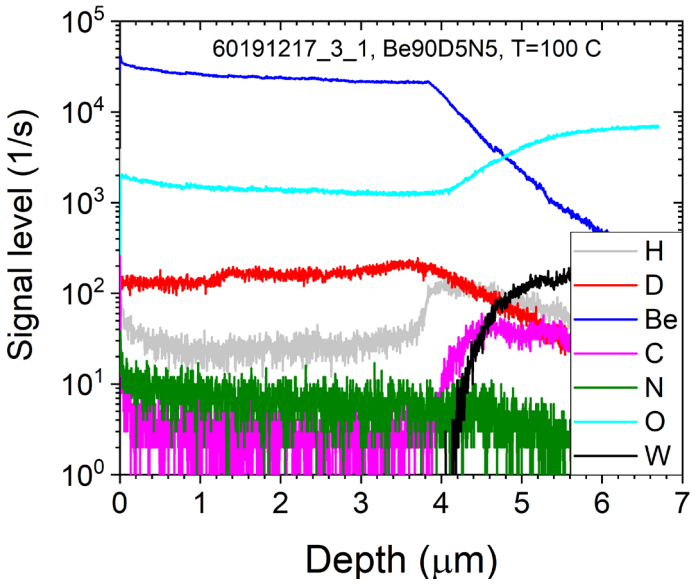
Corresponding task: ”Identifying elemental composition at different depths throughout the produced Be and W reference layers (VTT)”

Essentially these cover **surface analyses of various reference samples** in Finland (VTT and University of Helsinki)

Additional support of **1 day of accelerator beam time** for University of Helsinki

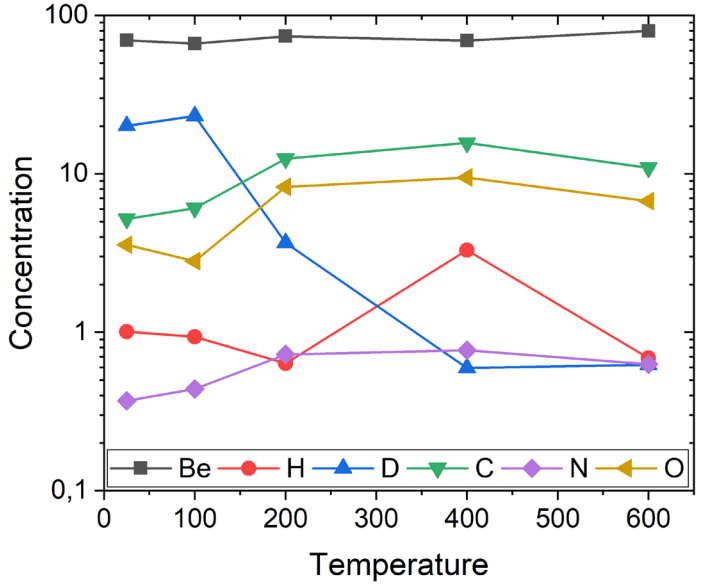
Examples of our analysis capabilities

SIMS depth profiling



Be-N-D sample, produced at 100°C

TOF-ERDA analyses



Be-C-O-D samples, produced at different temperatures

- SIMS and accelerator facilities of University of Helsinki available for sample analyses but due to maintenance not before September

More concrete plans for 2021

In 2021 we will put **most emphasis on Be-based samples** → huge number of samples from 2020 pending for measurements as well as detailed analyses of the obtained data

Topics to be investigated:

- Effect of thickness and surface morphology on fuel retention
- Influence of seeding and multiple fuel gases (He, N, Ne) on sample properties
- Stability of the layers

Next goal is to summarize the obtained results from Be samples in an overview paper → continuation of the contribution from PFMC 2019