ENRICH

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EUROPEAN COOPERATION
IN SCIENCE AND TECHNOLOGY

COST Action CA24131

European Network for Radiation-Detection-based Research and Innovation addressing increasing societal Challenges - ENRICH

1 st Call for applications for hosting STSMs

Host Organization (Name, website)	Excillum AB, www.excillum.com
Location/Country	Stockholm, Sweden
Short description of the activities that could be done during the period of stay	Open to proposals. We can provide access to our demo systems, X-ray sources, and X-ray imaging know-how. Our application lab works mainly with imaging (micro-CT, nano-CT, laminography) with the electronics/semiconductor and battery industry as main focus. Other techniques (scattering, diffraction, fluorescence) are possible, but not all equipment is necessarily available. We frequently collaborate with researchers to test new applications and evaluate new detectors.
Available Resources (Laboratories, experimental set-ups, beamlines, spectrometers, software, etc.…)	Demo setups with Excillum X-ray sources. The setups are equipped with sample and detector manipulators for CT acquisitions. 1. MetalJet micro-CT enabling CT at up to 3 Hz. Maximum detector distance ~4 m, suitable for diffraction/scattering experiments. 2. NanoTube nano-CT/laminography. High-resolution CT down to 150 nm resolution and laminography down to ~300 nm resolution. 3. X-ray phase-contrast microscope system with a MetalJet source and 2 CMOS detectors, one with microscope objectives.

	Additional setups may become available later, e.g. a larger cabinet with 2 m (width) x 3 m (length) x 2 m (height) for larger setups. Software: Siemens CERA reconstruction software, aRTist simulation software, custom reconstruction pipeline based on ASTRA toolbox. Setup (3) has its own reconstruction pipeline based on MITOS.
Specific instrumental details (γ-, X-ray Detectors, X-ray sources, data acquisition systems, etc.)	Permanently available detectors: Spectrum Logic 2824HS flatpanel, DECTRIS EIGER2 X CdTe 1M-W photon counting detector, Varex Thor 10GigE CdTe photon counting detector. Photonic Science sCMOS and custom detector with 6.5 µm pixel size, LuAG:Ce scintillator and microscope objectives (2x, 4x, 10x). Soon to be available: X-Spectrum Lambda 750K CdTe, another flatpanel with either 75 µm or 50 µm pixel size. More detectors may be available temporarily.
Relevance with ENRICH WGs	Relevant to WGs 2, 4, 5. Testing new equipment and applications; providing CT scanning capabilities.
Length of the STSM	Depending on the project. We can host for a longer period, but equipment may not be accessible for the whole duration.
Contact person (name, surname, email)	Till Dreier, till.dreier@excillum.com