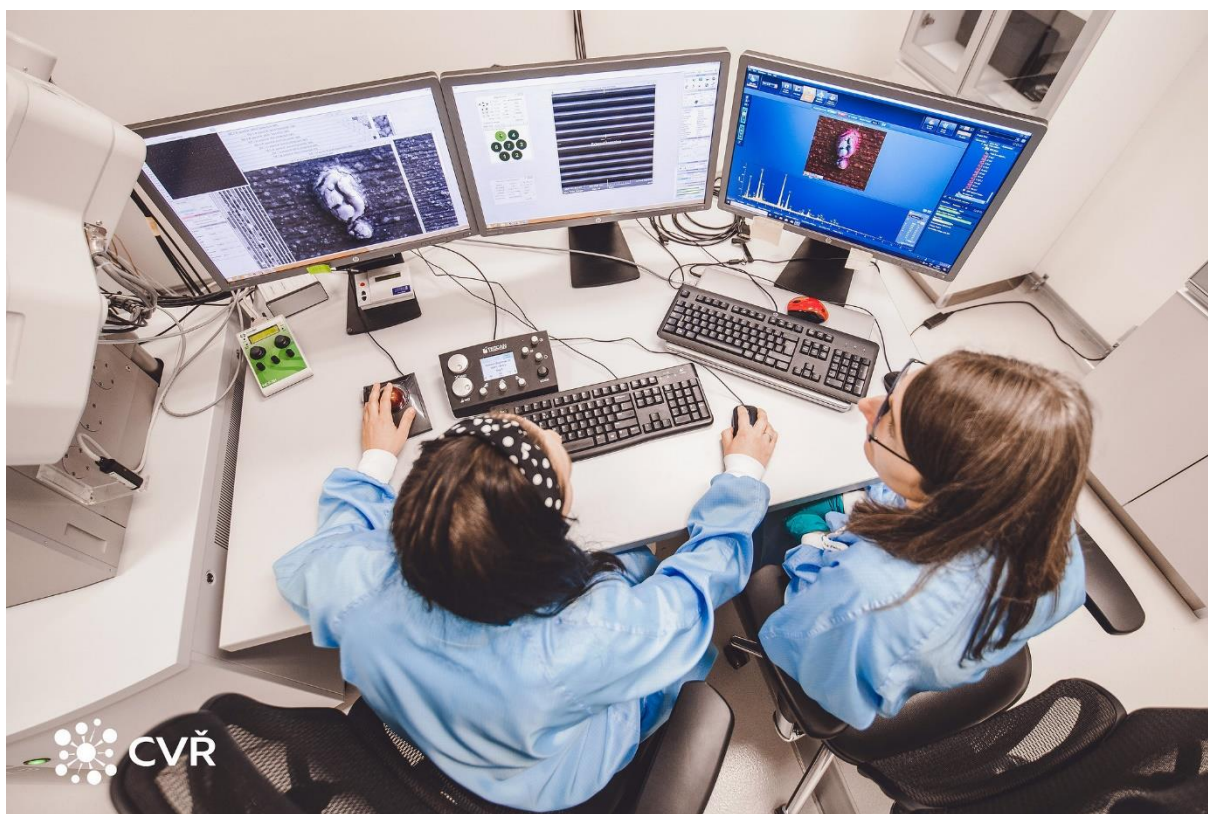


### **Microstructural analysis by Scanning Electron Microscopy**

Scanning Electron Microscope (SEM) LYRA3 GMU from the Tescan company placed in the Centre of Sensitive Analytical instruments in CVŘ is equipped with Field Emission Gun (FEG) source, EDS and WDS for the chemical analyses and EBSD used for crystallographic analyses. For the thin lamella preparation for Transmission Electron Microscopy (TEM), lithography and 3D tomography, SEM is equipped with Focused Ion Beam (FIB). Microscope disposes of SE and BSE detectors including in-lens mode and LVSTD. There is a possibility to perform the in-situ EBSD experiments at the thermal loading of specimens till the temperature 950°C in the microscope chamber. As well, in the detached workplace in Pilsen, there is possible to perform the in-situ EBSD tensile testing using the Gatan Microtest module for SEM and EBSD with 2000 N maximum load. SEM is equipped with the RSTEM detector for analysis of TEM lamellas or biological specimens. CVR has developed his own system to characterize the microstructural features as the secondary precipitates in the matrix, radiation-induced damage (radiation-induced precipitates, dislocations, voids, etc.), hydrides, etc. for statistic analysis.

#### **SEM-1 Scanning Electron Microscope (SEM) LYRA3 GMU in CVŘ laboratory.**



#### **SEM-1 Scanning Electron Microscope (SEM) LYRA3 GMU in CVŘ laboratory.**

