AGH Research Offer

Scanning electron microscope, SEM

Technical description:

MERLIN with GEMINI II column and FEG electron source offers high-resolution imaging with advanced detection modes, including InLens (SE), InLens (EsB), Angle Selective Back-Scattered Detector (AsB), 3DSM and STEM. The imaging settings of the Gemini II optics, such as accelerating voltage or beam current, are continuously adjustable. The parallel detection of secondary electrons (SE) in the axis of the objective lens and energy-selective backscatter (EsB) allows you to easily identify the most minor differences in the chemical composition of materials. The microscope is equipped with an EDX detector with the Quantax 800 microanalysis system (Bruker) and an EBSD detector with the Quantax CrystAlign 400 microanalysis system (Bruker).

Trade name: Merlin Gemini II (ZEISS)

More details: /equipment/skaningowy-mikroskop-elektronowy-sem/

Access type: External

Type of accreditation / certificate: Not applicable

Contact person: Kruk Adam

Contact person url: https://skos.agh.edu.pl/osoba/adam-kruk-1679.html

Responsible body: Faculty of Metals Engineering and Industrial Computer Science

Group / laboratory / team: Department of Physical Metallurgy and Powder Metallurgy. Centre of Electron Microscopy for Materials Science

Last update date: Aug. 29, 2023, 11:45 a.m.

Year of commissioning: 2009

IDUB research areas:

(PRA 5) Materials, technologies, and processes inspired by nature: biotechnology, bioinspirations in engineering and materials science, biosensors, bioenergetics, biocatalysis, biocomputers, and biocomputation
(PRA 7) Design, production, and testing of modern materials and the technologies of the future based on a multidisciplinary approach combining materials engineering with chemistry, physics, mathematics, and medicine

Research capabilities:

InLens (SE), InLens (EsB), Angle Selective back-scattered detector (AsB), 3DSM, STEM, SEM-EDX, SEM-EBSD

Measurement capabilities:

Chemical composition studies, high resolution, nanoscale orientation measurements

Conditions for providing infrastructure:

On terms agreed with the Head of the Laboratory - dr hab. Eng. Adam Kruk, prof. AGH