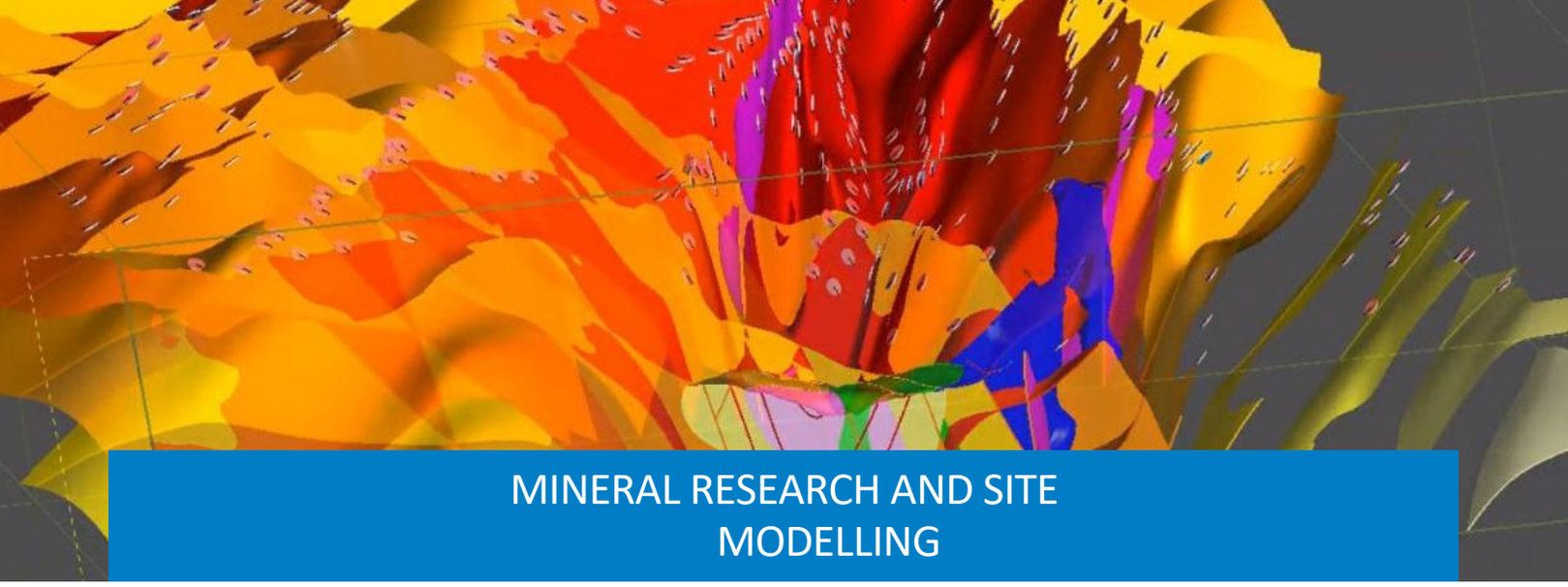

MINERAL RESEARCH AND SITE MODELLING

The material testing workshop of the University of Miskolc, equipped with a unique instrument park, plays a decisive role in the geological research of ore and non-metallic mineral raw material deposits and indications. Research is carried out in the fields of site model creation and geological interpretation, using best practices with innovative techniques, building on the expertise of the staff with modern analytical instruments, and extending to robotic geological research and sensor technology in the field of raw material research and instrument development. As a member of a research consortium, we have access to unique research technologies in Europe, such as UNEXUP, which is capable of mapping and in situ material analysis of cavities filled with groundwater such as flooded mining areas, caves, or karst watercourses.

SERVICES

RESEARCH METHODS FOR ORES

- Geological and structural geological mapping
- Preparation of geochemical sampling plan and sampling
- Preparation and sampling of ore geological sampling plan
- Sample preparation, quality control and quality assurance
- Phase analysis and ore studies
- Data interpretation, modelling, geological asset estimation

RESEARCH OF INDUSTRIAL MINERALS

- Preparation of a sampling plan and sampling
- Sample preparation, quality control and quality assurance
- Phase analytical and rock tissue studies
- Data interpretation, modelling, geological asset estimation

RESEARCH ON HYDROCARBON PLANTS

- Carbonate sedimentological studies
- Facies interpretation based on geological-geophysical data
- Pool analysis

RAW MATERIAL RESEARCH INSTRUMENT DEVELOPMENT

- Mapping and material testing of subsurface flooded cavities with a research robot
- Development of optical sensors for raw material research

TOOLS

- Research robot equipped with self-developed test units
- Electron beam microprobe with WDX, EDX spectrometers: Jeol JXA-8600 Superprobe
- X-ray powder diffractometers: Bruker D8 Advance and Bruker D8 Discover
- Schottky field emission Thermo Scientific Helios G4 PFIB CXe scanning electron microscope
- Rigaku SuperMini WD-XRF

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