

RESEARCH

BASIN MODELING

Petroleum systems
Sedimentary forward modeling

CARBONATE SEDIMENTOLOGY

Reservoir architecture & properties
Paleo-climate

DIAGENESIS

Integrated reservoir diagenesis
Carbonate diagenesis
Fracture sealing & vein formation

DISCONTINUITIES (FAULTS, FRACTURES, VEINS)

Smear & retention
4-D analogue modeling
Recrystallization, microtectonics and fluid-rock interaction

GEOMECHANICS

Numerical modeling
Borehole stability
Overpressure analysis

GEOCHEMISTRY

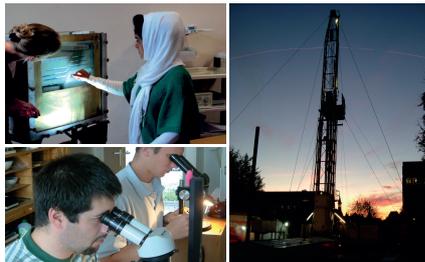
Organic & Inorganic
Environmental geochemistry

INTERFACE MINERALOGY

Surface processes in aqueous systems
Clay-based materials for industrial usage

MINERAL DEPOSITS

Ore body modeling & system analysis



PETROLOGY

Maturation & burial temperature
Mineral assemblages

PETROPHYSICS

Poro-Perm analysis
Rock properties & gas sorption

SALT

Salt & intra-salt structure, tectonics & dynamics
Evaporite properties

SEISMIC INTERPRETATION

Seismic geomorphology
Structural & reservoir models

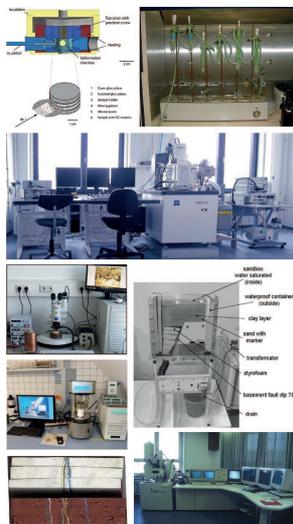
SEQUENCE STRATIGRAPHY

Log interpretation
Seismostratigraphic modeling

UNCONVENTIONALS & NEW TECHNOLOGIES

Coalbed methane & carbon dioxide sequestration
Tight gas & Gas shales

FACILITIES



Analogue modeling (e.g. sandbox)
BET gas adsorption
CBM & ECBM recovery
Cryo-SEM; BIB techniques
Element analysis (TIC, TOC, S, LA-ICP-MS, ICP-MS, ICP-OES)
Field analogue studies
Fluid inclusion measurements
GC-MS; LC-MS; GC-irmMS; Py-GC-MS
High-performance numerical modeling (FEM, DEM)
HP-HT cells; high pressure gas sorption
Ion chromatography
Microscopy
Mixed flow reactor systems
Move®, GoCad®, ER Mapper®, GIS
PetroMod®
Particle image velocimetry (PIV)
Petrel®; Kingdom Suite® seismic interpretation tools
Poro-Perm laboratories
Rock-eval pyrolysis
Sample preparation (polished sections)
Sonic logger
Streaming potential and zeta potential measurements
Triaxial cell
UV/VIS spectroscopy
XRD, 3D-XRD, XRF

PARTNERS



EMR GROUP

Clay & Interface Mineralogy

Prof. Dr. H. Stanjek

Geology & Palaeontology

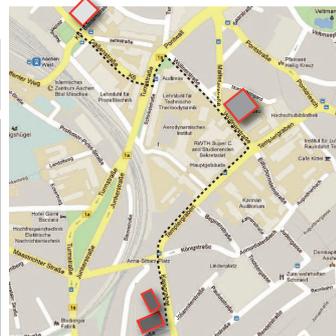
Prof. P. A. Kukla, Ph.D.

Reservoir-Petrology

Prof. Dr. C. Hilgers

Mineralogy & Economic Geology

Prof. Dr. F. M. Meyer



Geology & Geochemistry of Petroleum & Coal

Prof. Dr. R. Littke

Structural Geology, Tectonics & Geomechanics

Prof. Dr. J. L. Urai

STUDIES

The EMR offers **BSc-programs** in **Applied Geosciences** and **Geo-Resources Management** with lectures in methods of prospectivity, applied geophysics, mineral deposits, structural geology, sedimentology, petroleum geology, geochemistry and organic environmental geochemistry.

The EMR **MSc-program** in **Geo-Resources Management** offers two streams in "Resources Management" and "Environment Management" with lectures in inorganic environmental geochemistry, advanced geosciences, energy resources management, petroleum & coal resources, mineral resources, and geological planning & development.

The EMR **MSc-program** in **Applied Geosciences** offers lectures in structural geology, sedimentology, inorganic environmental geochemistry, interpretation of geophysical & petrophysical data, ore & coal geology, reservoir geology, reservoir engineering, petroleum systems, mineral resources, petroleum geochemistry, geological planning & development, and exploration economics



CONTACT

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