RUB Facilities, Equipment and Resources available for PIRE

- High pressure μDSC ~40 MPa
- High pressure reaction calorimetry ~10 MPa
- High pressure batch reactors with sampling of liquid and gas phases (40ml, 500ml, 2000ml) ~25 MPa
- High pressure density meter (oscillating U-tube) ~60 MPa
- Thermal conductivity measurement device ~ 4 MPa
- Magnetic Suspension Balance for gravimetric analysis ~13 MPa
- Numerical simulation software COMSOL Multiphysics
- Advanced mathematical models for thermodynamics, kinetics, physical properties of hydrate based processes and for process development including modeling of heat and mass transport in porous systems, chemical reaction
- Advanced mathematical models for thermodynamics, kinetics, physical properties of adsorption processes
- Optional (depends on investment and budget in PIRE
- high-pressure view-cell including an integrated acoustic levitation device (non-contact method to study mass transport and crystallization)