Doctoral Landscape Award (DLA) project

Professor Martin Trusler

October 2027 start

Thermophysical properties for natural hydrogen production

This PhD project aims to establish, by means of measurement and modelling, the basic thermophysical properties of hydrogen-brine systems relevant to the production of natural hydrogen and/or the process of underground hydrogen storage. The key properties to be studied are interfacial tension, solubility and diffusivity. State-of-the-art experimental facilities will be sued to make measurements of these properties of wide ranges of temperature and pressure. The experimental results will be used to tune suitable property models for applications in reservoir simulations of production or storage in relevant geological formations.