

3rd Sino-German Conference: Underground Storage of CO₂ and Energy

Conference venue: Hotel - DER ACHTERMANN, Rosentorstr. 20, 38640 Goslar, Germany

21.05.2013: 1st Day - Tuesday			
Welcome Address (Chairman: Hou Z)			
14:00	00:05	Thomas Hanschke, President of the Clausthal University of Technology	
14:05	00:05	Heping XIE, President of the Sichuan University	
Opening Speech (Chairman: Hanschke T)			
14:10	00:15	Miaogen Zhao (DFG), Vice Director of Sino-German Center for Research Promotion in Beijing	
Keynote Lecture (Chairman: Hou Z & Bauer S)			
14:25	00:35	XIE H , Li X et al.	Geological utilization and storage of carbon in China: Current status and prospects
15:00	00:35	Gerling JP	Geological storage of CO ₂ in Germany - State-of-play
15:35	00:35	Laloui L	Hydro-mechanical modelling of the CO ₂ injection into a deep aquifer system
16:10	00:30	Coffee Break (30 min.)	
Session 1: CO₂ for Enhanced Gas and Oil Recovery, Coal Bed Methane and Geothermal Systems (Chairmen: Li X & Kolditz O)			
16:40	00:25	Langefeld O & Agasty A	Production of coal bed methane in Germany
17:05	00:25	Ganzer L, Reitenbach V, Pudlo D et al.	Experimental and numerical investigation of CO ₂ injection and enhanced gas recovery effects in the Altmark gas field (Central Germany)
17:30	00:25	Shi Y, Xu T, Wang F, Yang Y, Lei H & Na J	Use of CO ₂ geological storage system to develop geothermal resources: a case study of a sandstone reservoir in the Songliao Basin of Northeast China
17:55	00:25	Harrison B & Falcone G	Carbon capture and sequestration (CCS) vs. Carbon capture and utilisation (CCU): A critical review of projects' screening criteria, operational specifics and steps to commercialisation
19:00		Dinner	
22.05.2013: 2nd Day - Wednesday			
Session 2: Integrated Energy and Environmental Utilization of Georeservoirs: Law, Risk Management & Monitoring (Chairmen: Zhou H & Bauer S)			
08:30	00:25	Weyer H	Legal framework for the coordination of competing uses of the underground in Germany
08:55	00:25	Qin T	Regulation of carbon capture and storage in China: Lessons from the EU CCS Directive
09:20	00:25	Großmann J & Dahmke A	Chances and risks of geological CO ₂ storage
09:45	00:25	Köhler S, Zemke J, Becker W, Wiebach J et al.	Operational reservoir monitoring at the CO ₂ pilot storage site Ketzin, Germany
10:10	00:30	Coffee Break (30 min.)	
Session 3: Trapping Mechanisms and Multi-Barrier Sealing Systems for Long-Term CO₂ Storage (Chairmen: Ju Y & Ganzer L)			

10:40	00:25	Hou Z, Wundram L, Were P, Zhao J	Developing, modelling and in-situ testing a long-term wellbore seal in the Altmark natural gas field
11:05	00:25	Singh A, Delfs J-O, Goerke U-J & Kolditz O	Towards physical aspects affecting a possible leakage of geologically stored CO ₂ into the shallow subsurface
11:30	00:25	Bai M & Reinicke KM	Numerical simulation of CO ₂ leakage through abandoned wells during CO ₂ underground storage
11:55	00:25	Tian H, Xu T, Wang F, Sun Y & Yue G	A numerical study of caprock mineral alteration and self-sealing efficiency in CO ₂ geological storage
12:20	01:00	Lunch (60 min.)	
Session 4: Coupled THMC-Processes and Numerical Modelling (Chairmen: Xu T & Kolditz O)			
13:45	00:25	Gou Y, Hou Z, Liu HJ, Zhou L & Were P	Numerical simulation of carbon dioxide injection for enhanced gas recovery (CO ₂ -EGR) in Altmark natural gas field
14:10	00:25	Li D, Bauer S, Benisch K, Graupner B & Beyer C	OpenGeoSys-ChemApp: a coupled simulator for reactive transport in multiphase systems: Code development and application at a representative CO ₂ storage formation in Northern Germany
14:35	00:25	Tatomir A, Licha T, Schaffer M, Maier F&Sauter M	Modelling of kinetic interface sensitive tracers for two-phase flow systems
Session 5: Rock Mechanical Behaviour in Consideration of Cyclic Loading, Dilatancy, Damage, Self-sealing and Healing (Chairmen: Minkley W & Yang C)			
15:00	00:25	Düsterloh U, Lerche S & Lux K-H	Damage and healing properties of rock salt: Long-term cyclic loading tests and numerical back analysis
15:25	00:25	Liu JF et al.	Laboratory investigations on the damage and compaction behavior of rock salt
15:50	00:30	Coffee Break (30 min.)	
Session 6: Underground Storage of (Renewable) Energy (Chairmen: Zhou H & Lux K-H)			
16:20	00:25	Zhou HW	A fractional derivative approach to three creep regions of salt rock
16:45	00:25	Lux K-H	Recent developments in geotechnical design of natural gas storage cavities regarding physical modelling as well as numerical simulation
17:10	00:25	Yang CH, Li YP et al.	The stability and tightness evaluation of bedded salt formations for underground gas/oil storage: The influence of sedimentary rhythm and mechanical characteristics of the interfaces
17:35	00:25	Ramos EP & Falcone G	Recovery of the geothermal energy stored in abandoned mines
18:00	00:25	Pudlo D, Ganzer L, Henkel S, Kühn M et al.	The H2STORE Project: Hydrogen underground storage - A feasible way by storing electrical power in geological media?
Session 7: Discussion about Future Cooperation Possibilities & Summary of the Conference Results			
18:25	00:15	All participants	Discussion about future cooperation possibilities and about possible joint projects
18:40	00:05	Hou Z.	Résumé
19:30		Oliver Junk, Mayor of Goslar Thomas Hanschke, President of the TU Clausthal	Banquet in the Kaiserpfalz