

# 9<sup>TH</sup> **Clay** CONFERENCE

HANNOVER, GERMANY  
25-28 NOV 24



## POSTER SESSIONS

**9<sup>TH</sup> INTERNATIONAL CONFERENCE  
ON CLAYS IN NATURAL AND ENGINEERED BARRIERS  
FOR RADIOACTIVE WASTE CONFINEMENT**

[www.clayconference2024.de](http://www.clayconference2024.de)





### **Students**

are enrolled in a tertiary education programme at any university, including doctoral studies/PhD, Master and Bachelor students.



### **Early Career Researchers'**

highest tertiary degree has been awarded within the last 5 years before the Clay Conference 2024.



### **Radwaste Starters'**

highest tertiary degree has been awarded more than 5 years before the Clay Conference 2024 but they have started working in the radwaste field less than 3 years before the Clay Conference 2024.

- Topic 01 Repository projects and programmes, including RD&D programmes for clay-based disposal systems worldwide
- Topic 02 Geology, Hydrogeology and Hydrogeochemistry
- Topic 08 Technological operations, performance assessment and optimization of components
- Topic 09 Monitoring (from initial state to post-closure period and from sensors to data management)
- Topic 10 Artificial Intelligence apps, digitalisation and Digital Twins applicable to or motivated by radwaste disposal in clay based concepts

Position	Abstract	Title / Presenting Author / Country	Session
1	#1463	<b>What limits the temperature at canister surface in clay-based HLRW concepts? – discussion in an international context</b> Chaudry, Saleem (DE)	Wednesday
2	#118	<b>An assessment strategy for the evaluation of radionuclide migration from potential repositories in claystone</b> Behrens, Christoph (DE)	Monday
3	#133	<b>Suitability investigations of Lithuanian clay formations for the deep geological repository of radioactive wastes</b> Kanopiene, Roma (LT)	Tuesday
4	#299	<b>The role of bentonite in the high-level radioactive waste repository design</b> Gottron, Eva-Maria (DE)	Wednesday
5	#327	<b>CIGEO project – analysis of the effect of segmental lining joints on the tunnel mechanical behaviour during the operational phase and over the long term</b> Camusso, Marco (FR)	Monday
6	#356	<b>Modelling of unsaturated homogenisation with an enhanced bentonite material model using COMSOL Multiphysics</b> Spetz, Alex (SE)	Tuesday
7	#402	<b>Preliminary design of a disposal facility for high-level radioactive waste in claystone</b> Werres, Michael (DE)	Wednesday
8	#185	<b>Adapting disposal concepts to reflect emerging UK geological environments</b> Kirby, Matthew Edward (GB)	Monday
9	#308	<b>Exploring the dynamics of aquifer - aquitard systems: new insights from 81Kr model ages</b> Traber, Daniel (CH)	Tuesday

Position	Abstract	Title / Presenting Author / Country	Session
10	<b>#132</b>	<b>Characterization of the Lower Cambrian and the Lower Triassic clayey formations in terms of the potential for the siting of Deep Geological Repository of radioactive waste in Lithuania</b> Lazauskienė, Jurga (LT)	Wednesday
11	<b>#271</b>	<b>New data on the compositional-structural characteristics of the Opalinuston Formation from Southern Germany: facies-based investigations and mineralogical analyses</b> Kneuker, Tilo (DE)	Monday
12	<b>#165</b>	<b>CEC as quality proof for smectitic phases in lower Cretaceous clay rocks – illite-smectite ± pure smectite?</b> Dohrmann, Reiner (DE)	Tuesday
13	<b>#302</b>	<b>Geological variability of the Opalinuston-Formation in Southern Germany: new insights from the research project SEPIA</b> Mann, Thomas (DE)	Wednesday
14	<b>#142</b>	<b>Effects of ionic strength on cation exchange selectivities of Ca(II), Mg(II), K(I) for Na(I) in compacted and dispersed montmorillonite</b> Yasuda, Ryo (JP)	Monday
15	<b>#170</b>	<b>Multi-scale 2D and 3D characterisation for enhanced understanding of UK lower strength sedimentary rocks</b> Taylor, Kevin G (GB)	Tuesday
16	<b>#191</b>	<b>Overview of geodynamic evolution effect on hydrogeological performance of deep geological repository site for radwaste. Feed back and lessons learned from two decades of studies</b> Benabderrahmane, Hakim (FR)	Wednesday
17	<b>#229</b>	<b>Geochemical investigation of veins and evidence for paleo fluid flow in Opalinus Clay</b> Aschwanden, Lukas (CH)	Monday
18	<b>#243</b>	<b>Unravelling the depositional model of the Opalinus Clay using grain-size variability</b> Zimmerli, Géraldine Nicole (CH)	Tuesday
19	<b>#280</b>	<b>Kiirunavaara Ca-smectite, northern Sweden: a natural analogue of long-term clay stability</b> Schneeberger, Raphael (CH)	Wednesday
20	<b>#300</b>	<b>Comparison of the clay mineralogy of fault and host rocks in the Opalinus Clay, Switzerland</b> Gier, Susanne (AT)	Monday
21	<b>#253</b>	<b>Influence of texture on the chloride accessible porosity fraction explored by SEM and <math>\mu</math>CT data</b> Jenni, Andreas (CH)	Tuesday
22	<b>#278</b>	<b>Unveiling early diagenetic carbonate precipitation: sequential C-isotope analysis of calcite and siderite in Opalinus Clay</b> Wohlwend, Stephan (CH)	Wednesday

Position	Abstract	Title / Presenting Author / Country	Session
23	<b>#360</b>	<b>Extraction, quantification and isotopic characterisation of gases dissolved in porewater of argillaceous rocks – method comparison and evaluation</b> Eichinger, Florian (DE)	Monday
24	<b>#425</b>	<b>Geochemistry and pore water in the lower confining units of the Opalinus Clay at Mont Terri Rock Laboratory (Switzerland)</b> Fernández, Ana María (ES)	Tuesday
25	<b>#340</b>	<b>Geochemistry of pore waters in Opalinus Clay at the Mont Terri Rock Laboratory within the Bitumen-Nitrate-Clay interaction experiment</b> Weyand, Torben (DE)	Wednesday
26	<b>#343</b>	<b>CO<sub>2</sub> Long-term Periodic Injection Experiment (Mont Terri URL): Introduction to the in-situ experiment and results of the first phase</b> Ziegler, Martin (CH)	Monday
27	<b>#344</b>	<b>Mont Terri BIM – project overview and technical realisation</b> Ziegler, Martin (CH)	Tuesday
28	<b>#119</b>	<b>As-placed dry density of gap fill material in overbreak zones within the placement room</b> Kim, Chang Seok (CA)	Wednesday
29	<b>#157</b>	<b>GeM-DB – a basis for planning surface exploration programs</b> Dlugosch, Raphael (DE)	Monday
30	<b>#328</b>	<b>Underground storage of high-grade radioactive waste in mudrock: In search of the Holy Grail</b> Warr, Laurence (DE)	Tuesday
31	<b>#361</b>	<b><sup>39</sup>Ar and <sup>37</sup>Ar in deep groundwater: Evaluation regarding young components, cross-formation flow and in-situ production</b> Rufer, Daniel (CH)	Wednesday
32	<b>#404</b>	<b>Long term monitoring of physical and chemical parameters of a cemento-bentonitic filling material (CBFM) and of corrosion potential of a horizontal pipe made of carbon steel, submerged by the CBFM into a sealed cell of underground gallery</b> Betelu, Stéphanie (FR)	Monday
33	<b>#131</b>	<b>Development and emplacement of an annular grout envisaged for HLW emplacement drifts to study long-term interaction with Opalinus Clay</b> Martin, Lukas (CH)	Tuesday
34	<b>#355</b>	<b>Geochemical profiles in the hydrogeological system of the Opalinus Clay at Mont Terri, Switzerland</b> Schleicher, Anja Maria (DE)	Wednesday
35	<b>#260</b>	<b>Influence of rescue chambers on the design of geological repositories in clay</b> Lehnen, Felix (DE)	Monday

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36 	<b>#385</b>	<b>3D Hydro-Mechanical modelling to support the design of the REG experiment in the Callovo-Oxfordian Claystone</b> Corman, Gilles (BE)	Tuesday
37 	<b>#177</b>	<b>Crushed claystone used as material for the construction of EBS-components in repositories for nuclear waste – a generic methodology for material selection</b> Middelhoff, Marvin (DE)	Wednesday
38	<b>#333</b>	<b>MiniSandwich experiment – performance test in laboratory of a bentonite-based shaft sealing system</b> Rölke, Christopher (DE)	Monday
39	<b>#292</b>	<b>Monitoring fluid movement and swelling pressure development in semi-technical scale Sandwich sealing system experiments</b> Hofmann, Martin (DE)	Tuesday
40	<b>#297</b>	<b>Rock mass response to processes in a Sandwich shaft sealing system</b> Hesser, Jürgen (DE)	Wednesday
41 	<b>#126</b>	<b>Multi-scale modelling of the Sandwich experiment in Mont Terri</b> Friedenberg, Larissa (DE)	Monday
42 	<b>#205</b>	<b>Performance of MoxOy pH sensor prepared by thermal oxidation for the long term monitoring of nuclear waste disposals</b> Aoubida, Djouhar (FR)	Tuesday
43 	<b>#235</b>	<b>Modelling sulfide corrosion in the Swiss HLW repository under various repository settings</b> Ma, Jin (CH)	Wednesday
44 	<b>#454</b>	<b>Study on the construction of disposal scenarios and a tentative migration modelling of cesium for the final disposal of radioactively contaminated waste outside of Fukushima Prefecture</b> Minari, Eriko (JP)	Monday
45	<b>#427</b>	<b>Excavation of the Konrad 2 shaft landing station in a clay and marl claystone: geotechnical challenges and support solutions</b> Polster, Mirko (DE)	Wednesday
46	<b>#186</b>	<b>Development of boron-enhanced metakaolin-based geopolymers for the immobilisation of radioactive debris with the potential of neutron absorption</b> Elakneswaran, Yogarajah (JP)	Tuesday
47	<b>#434</b>	<b>Feedback on the multi-scale mechanical and technical demonstration of drift construction at the French URL</b> Zghondi, Jad (FR)	Wednesday
48 	<b>#204</b>	<b>All-solid-state reference electrode based on lithium lanthanum titanium oxide (LLTO) for the long term monitoring of nuclear waste disposals</b> Aoubida, Djouhar (FR)	Monday



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49 	<b>#245</b>	<b>Differentiation of fractures and rock mass deformation in clay rocks by Machine Learning</b> Wang, Rushan (CH)	Tuesday
50	<b>#195</b>	<b>A wireless data transmission system for the future deep geological repository</b> García-Siñeriz, José Luis (ES)	Wednesday
51 	<b>#310</b>	<b>Direct Mineral Content Prediction from Drill Core Images via Transfer Learning</b> Boiger, Romana (CH)	Monday
52	<b>#261</b>	<b>Full-Scale In-Situ System Test (FISST) at the Finnish spent nuclear fuel disposal facility. Analysis and simulation</b> Pintado, Xavier (FI)	Wednesday
53	<b>#400</b>	<b>Large-scale reactive transport simulations of uranium migration in Opalinus Clay accelerated by means of surrogate models</b> De Lucia, Marco (DE)	Tuesday
54	<b>#317</b>	<b>Observation of saturation processes in the Sandwich experiment with ERT (URL Mont Terri)</b> Furche, Markus (DE)	Wednesday
55	<b>#368</b>	<b>OpenWorkFlow – Open-source synthesis-platform for safety investigations in the site selection process</b> Kolditz, Olaf (DE)	Monday
56 	<b>#290</b>	<b>Estimating Water Retention of Compacted Bentonite with Cat-Boost: Integrating Physical Model Residuals and Penalized Learning</b> Shehab, Muntasir (DE)	Wednesday
57 	<b>#441</b>	<b>Influence of microstructure and pore saturation in measuring corrosion rates of a carbon steel API 5L X65 in contact with cement grout in future nuclear waste disposal program</b> Sano Moyeme, Yendoube Charles (FR)	Tuesday
58 	<b>#442</b>	<b>Influence of polysulfide radicals in measuring corrosion rates of a carbon steel API 5L X65 in contact with cement grout in future nuclear waste disposal program</b> Sano Moyeme, Yendoube Charles (FR)	Wednesday

Topic 03 Fluid flow and solute/radionuclide migration

Topic 07 Chemical and mineralogical alteration processes and microbiological processes

Position	Abstract	Title / Presenting Author / Country	Session
60	#1464	<b>Cation exchange capacity measurement for bentonite-cement reactions in a nuclear waste disposal – what are we really measuring?</b> Derkowski, Arkadiusz (PL)	Tuesday
61	#146	<b>Management of sorption data in support to radioactive waste management</b> Brassinnes, Stéphane (BE)	Wednesday
62	#184	<b>Development and use of the thermochimie database</b> Brassinnes, Stéphane (BE)	Monday
63	#109	<b>Measurement of pore water density in a bentonite using decalin</b> Wang, Hailong (JP)	Tuesday
64	#130	<b>Investigating the effects of small organic molecules on the adsorption of uranyl on clay minerals with molecular dynamics</b> Ličko, Jakub (FR)	Monday
65	#145	<b>Development of test specimens for evaluating permeability measurements of tight rocks</b> Dietl, Carlo (DE)	Tuesday
66	#155	<b>Numerical analysis of permeability in sphere-platelet mixtures</b> Yagi, Tsubasa (JP)	Wednesday
67	#156	<b>Numerical investigation of pore characteristics in spherical and platelet particle beds</b> Miura, Otono (JP)	Monday
68	#163	<b>CP1 and Tribicarb-3D: unique long term and large scale in situ migration tests in Boom Clay at the HADES Underground Research Laboratory</b> Aertsens, Marc (BE)	Tuesday
69	#193	<b>Trace elements in Dutch Paleogene clays</b> Neeft, Erika (NL)	Wednesday
70	#244	<b>Influence of salinity gradients on the diffusion of water and ionic species in dual porosity clay samples</b> Tertre, Emmanuel (FR)	Monday
71	#266	<b>Effect of redox state on the redox sensitive element retention by Aptian sands</b> Orucoglu, Esra (FR)	Tuesday
72	#268	<b>Effect of environmental conditions on the sorption of <sup>241</sup>Am(III) on natural clayrocks and their main constituents</b> Van Laer, Liesbeth (BE)	Wednesday



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73	<b>#270</b>	<b>Diffusion experiment (36Cl, 3H) across concrete/claystone interface</b> Mäder, Urs (CH)	Monday
74 	<b>#283</b>	<b>Mechanochemical activation of synthetic Na-n-micas – applications in retention of high-level radioactive waste</b> López-Marín, Aníbal (ES)	Tuesday
75 	<b>#307</b>	<b>Radionuclide transport in variably water-saturated compacted clays: a pore-scale view</b> Yang, Yuankai (DE)	Wednesday
76	<b>#313</b>	<b>Long Term Safety studies at EDF with code_saturne</b> Bonelle, Jérôme (FR)	Monday
77 	<b>#318</b>	<b>Development of a separation method for Am-, Sr-, Pu- and U-isotopes in concrete using extraction chromatography</b> Steckholzer, Gloria (AT)	Tuesday
78 	<b>#319</b>	<b>Insights into the interactions of clay minerals and humic acids: a molecular dynamics study</b> Matsushima, Kanato (JP)	Wednesday
79 	<b>#325</b>	<b>Interaction of groundwater in crystalline rock and a compacted bentonite buffer</b> Kröhn, Michael (DE)	Monday
80	<b>#332</b>	<b>Migration behaviour of Ra-226 in the sandy facies of Opalinus Clay</b> Ait-Mouheeb, Naila (DE)	Tuesday
81 	<b>#346</b>	<b>Transport Properties of Water in a Polydisperse Coarse-Grained Model of Sodium Montmorillonite</b> Zhang, Yaoting (CA)	Wednesday
82	<b>#405</b>	<b>Donnan equilibrium in compacted bentonite</b> Hedström, Magnus (SE)	Tuesday
83	<b>#406</b>	<b>Comparison of experimental diffusion data of various cationic elements in rock samples from the deep-hole drilling campaign in northern Switzerland with model predictions by the ClaySorDif model</b> Glaus, Martin A. (CH)	Wednesday
84 	<b>#378</b>	<b>Migration of caesium decreases with increasing compaction of MX-80 bentonite</b> Hennig, Theresa (DE)	Monday
85 	<b>#382</b>	<b>Neptunium migration in Opalinus Clay – one experiment with multiple numerical geochemical solutions</b> Hennig, Theresa (DE)	Tuesday
86	<b>#389</b>	<b>Iron(II)-montmorillonite interaction: experimental results and modelling for dispersed and compacted systems</b> Hadi, Jebril (CH)	Wednesday

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87 	<b>#397</b>	<b>Impact of temperature on the transfer of mobile tracers in the Toarcian clayrock at the Tournemire URL</b> Humbezi Desfeux, Maïwenn (FR)	Monday
88	<b>#407</b>	<b>Effective diffusivity prediction by considering multivariable regression and rock properties</b> Prasianakis, Nikolaos (CH)	Tuesday
89	<b>#418</b>	<b>Electrostatic interactions at clay mineral surfaces: linking geochemistry with geomechanical properties</b> Tournassat, Christophe (FR)	Wednesday
90 	<b>#138</b>	<b>Harnessing microbial processes consuming hydrogen in radioactive waste repositories</b> Rolland, Camille (CH)	Tuesday
91	<b>#323</b>	<b>Transport experiments in claystone: electrostatic effects and preferential pathways</b> Jenni, Andreas (CH)	Wednesday
92	<b>#236</b>	<b>Diffusion of Np through Illite du Puy</b> Joseph, Claudia (DE)	Monday
93	<b>#234</b>	<b>Geochemical processes in a repository with clay barriers at high saline conditions</b> Joseph, Claudia (DE)	Tuesday
94	<b>#162</b>	<b>Experimental investigation of the changes in transport properties of Opalinus claystone/concrete interface samples from the Mont Terri CI experiment</b> Maes, Norbert (BE)	Wednesday
95	<b>#179</b>	<b>Successful gas tests at the GAs permeable Seal Test (GAST) – highlights and lessons learned (Grimsel Test Site, CH)</b> Kober, Florian (CH)	Tuesday
96	<b>#150</b>	<b>Optimizing wellbore sealing with Japanese Na-Bentonite: insights from two vertical wells at Grimsel Test Site, Switzerland</b> Schneeberger, Raphael (CH)	Monday
97	<b>#321</b>	<b>Cement-Bentonite interaction with different cement materials at elevated temperatures 2: modeling</b> Anraku, Sohtaro (JP)	Tuesday
98	<b>#291</b>	<b>Cement-Bentonite interaction with different cement materials at elevated temperatures 1: experiments</b> Kawakita, Ryohei (JP)	Wednesday
99	<b>#254</b>	<b>Experimental and modelling study of the hydro-chemo-mechanical behaviour of sand bentonite mixtures in hyperalkaline conditions</b> Idiart, Andrés (ES)	Monday

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100	<b>#127</b>	<b>Comparison of different iron/bentonite exhibition tests and effect of the type of exchangeable cation on corrosion products</b> Kaufhold, Stephan (DE)	Tuesday
101	<b>#411</b>	<b>Gains and losses of exchangeable cations in 'alternative bentonite buffer material in-situ tests' (ABM-1, -2 and -5) after heating from 140 °C to 250 °C – what has caused observed differences?</b> Dohrmann, Reiner (DE)	Wednesday
102	<b>#111</b>	<b>Reactive transport modelling of material interface evolution in the HLW near-field</b> Kosakowski, Georg (CH)	Monday
103	<b>#424</b>	<b>Sulfide transport through MX-80 bentonite under various geochemical conditions</b> Krol, Magdalena (CA)	Tuesday
104	<b>#430</b>	<b>Evolution of microbial populations under the influence of increasing temperature in the Callovian-Oxfordian clay-rich rock</b> Lundy, Mélanie (FR)	Wednesday
105	<b>#172</b>	<b>Understanding the effect of indigenous microorganisms in bentonite on the biocorrosion of metal canisters, for the final disposal of nuclear waste (under relevant DGR conditions)</b> Mumford, Adam David (GB)	Monday
106	<b>#217</b>	<b>Differences between the basal spacings of random powder patterns and air-dried oriented aggregates of bentonite samples</b> Cuevas, Jaime F. (ES)	Wednesday
107	<b>#226</b>	<b>Cation exchange parameters for Opalinus Clay and its confining units</b> Wersin, Paul (CH)	Monday
108	<b>#241</b>	<b>Concrete-clay interaction – a systematic review and modelling study</b> Laviña, Marcelo (ES)	Tuesday
109	<b>#246</b>	<b>Hydrogeochemical processes occurring in excavated argillaceous rocks stored at the surface as heaps and consequences on water chemistry</b> Agnel, Myriam I. (FR)	Wednesday
110	<b>#257</b>	<b>Geochemical alteration in selected bentonites affected by thermal interaction with steel and saline solution hydration</b> Cuevas, Jaime F. (ES)	Monday
111	<b>#258</b>	<b>Studying the reactive transport of CO<sub>2</sub> in Opalinus Clay with experimental and numerical analyses</b> Chen, Shuang (DE)	Tuesday
112	<b>#265</b>	<b>A mechanistic understanding of bentonite alteration at corroding iron interfaces</b> Haynes, Haydn Martin (GB)	Wednesday

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113	<b>#275</b>	<b>Iron-bentonite interaction in a water-saturated low temperature environment: mineralogy and microstructure</b> Turrero, María Jesús (ES)	Monday
114	<b>#284</b>	<b>Exchangeable and soluble ion populations in semi-technical scale Sandwich sealing system experiments</b> Emmerich, Katja (DE)	Tuesday
115	<b>#301</b>	<b>Mutual effects of pH, matrix elements and organic ligands on the mobility of U(VI) in bentonite systems</b> Schmeide, Katja (DE)	Wednesday
116	<b>#305</b>	<b>Mineralogical evolution of COx claystone during in situ MCO experiment</b> Michau, Nicolas (FR)	Monday
117	<b>#309</b>	<b>Delving into bentonite sedimentation dynamics</b> Leal Olloqui, Macarena (SE)	Tuesday
118	<b>#375</b>	<b>Quantitative analysis of the mineralogical composition of bentonites by full pattern fitting using the powdR package</b> Hillier, Stephen (GB)	Wednesday
119	<b>#376</b>	<b>Anoxic corrosion of carbon steel in different cementitious media and high temperature conditions: comparison between laboratory test and in situ experiment results</b> Wittebroodt, Charles (FR)	Monday
120	<b>#384</b>	<b>Leaching kinetics of metakaolin in alkaline solution</b> Kikuchi, Ryosuke (JP)	Tuesday
121	<b>#396</b>	<b>Acidification and CO<sub>2</sub>-degassing in bentonites triggered by oxidation of Fe(II)-containing minerals</b> Dultz, Stefan (DE)	Wednesday
122	<b>#420</b>	<b>Redox buffering by iron-bearing clay minerals in the ferrous iron/smectite system</b> Neumann, Anke (CH)	Monday
123	<b>#444</b>	<b>Reactive transport model of the long-term geochemical evolution in the near field of a HLW repository at the disposal cell scale: sensitivities, variants and model simplifications</b> Samper, Javier (ES)	Tuesday
124	<b>#437</b>	<b>Dynamic and static experiments for the identification of the effect of transient processes on corrosion</b> Fernández, Ana María (ES)	Wednesday
125	<b>#445</b>	<b>Modelling the reactive transport processes in unsaturated clay barriers – inclusion of capillary geochemistry</b> Sedighi, Majid (GB)	Monday
126	<b>#450</b>	<b>MINFF: A new classical forcefield for (clay-)minerals</b> Holmboe, Michael (SE)	Tuesday

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127	<b>#152</b>	<b>Effect of organic molecules on radionuclide retention in COx clay rock: the case of Ni-TBP/EDTA mixtures</b> Dagnelie, Romain V.H. (FR)	Wednesday
128	<b>#225</b>	<b>Microbial ecology of engineered barrier components of a deep geological repository for used nuclear fuel</b> Engel, Katja (CA)	Monday
129	<b>#202</b>	<b>Five-year laboratory tests of thermo-hydro-mechanical-chemical evolution of compacted bentonite: an experimental and modelling study</b> Villar, María Victoria (ES)	Tuesday
130	<b>#386</b>	<b>Distorting mirrors – new perspectives on the layer charge reduction phenomena in heat-treated smectites: implications for CEC measurements in bentonites</b> Kuligiewicz, Artur (PL)	Wednesday
131	<b>#423</b>	<b>Steel corrosion and reactive transport model in bentonite for predicting spent fuel disposal package lifetime</b> Hokr, Milan (CZ)	Monday





**Topic 04** Thermal-Hydraulic-Mechanical and -Chemical coupled processes of clay host rock (with a certain focus on temperature-induced effects)

**Topic 05** Thermal-Hydraulic-Mechanical and -Chemical coupled processes of bentonite barrier material (with a certain focus on temperature-induced effects)

**Topic 06** Hydro-mechanical and gas transport processes in the EDZ/EdZ

Position	Abstract	Title / Presenting Author / Country	Session
132	<b>#367</b>	<b>Self-sealing potential of fractures as a result of hydration, shear, and temperature</b> Cuss, Robert (GB)	Wednesday
133	<b>#117</b>	<b>Experimental study of swelling and permeability of a Bavarian bentonite, Friedland clay, and Opalinus clay at 35 – 150 °C</b> Meleshyn, Artur (DE)	Monday
134	<b>#141</b>	<b>Deriving a method for host rock specific temperature compatibility: clay rock</b> Mayer, Kim-Marisa (DE)	Tuesday
135	<b>#192</b>	<b>Effect of sodium occupancy and solute concentration on the swelling behaviour of poorly indurated Boom Clay</b> Al Mais, Hassan (BE)	Wednesday
136	<b>#238</b>	<b>A new experimental system for studying gas formation and release during laboratory rock core heating experiments</b> Helten, Oliver (DE)	Monday
137	<b>#251</b>	<b>Influence of temperature on the self-sealing of fractures in the Callovo-Oxfordian claystone</b> Grgic, Dragan (FR)	Tuesday
138	<b>#286</b>	<b>The anisotropic creep behaviour and the long-term strength of Opalinus Clay</b> Gotzen, Lina (DE)	Wednesday
139	<b>#293</b>	<b>Temperature influence on swelling pressure of Ca-Bentonite up to 150 °C</b> Lee, Deuk-Hwan (KR)	Monday
140	<b>#320</b>	<b>Conclusions on the post-yield behaviour of Opalinus claystone from multistage triaxial tests</b> Gerolymatou, Eleni (DE)	Tuesday
141	<b>#331</b>	<b>Numerical analyses of geological barrier integrity under parameter uncertainty</b> Thiedau, Jan (DE)	Wednesday
142	<b>#334</b>	<b>The CHENILLE experiment: Coupled beHaviour undErstaNdIng of fauLts: from the Laboratory to the fiEld</b> Giese, Rüdiger (DE)	Monday



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143 	<b>#372</b>	<b>Effect of pore water salinity on the tensile strength of Boom Clay</b> de Jong, Ties (NL)	Tuesday
144	<b>#374</b>	<b>Assessment of in-situ heater experiments conducted in the Callovo-Oxfordian claystone based on the French high-level radioactive waste disposal concept</b> Plúa, Carlos (FR)	Wednesday
145	<b>#393</b>	<b>COCONS: A numerical tool for Thermo-Hydro-Mecanical dimensioning of a deep geological repository High Level Waste area</b> Escoffier, Florian (FR)	Monday
146 	<b>#394</b>	<b>THM-Modelling of the ALC1605 in situ heating experiment in Callovo-Oxfordian clay formation</b> Simo, Eric (DE)	Tuesday
147	<b>#121</b>	<b>HE-E heating experiment in the Mont Terri rock laboratory – sampling of a hot, unconsolidated granular bentonite buffer after 12 years of heating during continued operation</b> Kober, Florian (CH)	Wednesday
148	<b>#120</b>	<b>HotBENT at the Grimsel Test Site – Early THMC evolution of a buffer at up to 200 °C</b> Kober, Florian (CH)	Monday
149	<b>#212</b>	<b>Open-source implementation of a transversely isotropic elasto-visco-plastic damage model for clay shales in MFront and OpenGeoSys</b> Ghasabeh, Mehran (DE)	Tuesday
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