



Agenda of the 3rd Annual Workshop of the Cebama Project

April 17th – 18th, 2018 - Nantes, France

*Cement-based materials,
properties, evolution and
barrier functions*



EURATOM

Horizon 2020 Collaborative Project



Tuesday, April 17th, 2018

Place : Westotel

Rue de la Vrière, 34, La Chapelle-sur-Erdre, (France)

- 10:30-12:00 **ExCom** meeting
(restricted to ExCom members. Room MYKONOS)
- 13:00-13:30 **Welcome + Presentation by the Coordination Team** – room *LES OLIVIERS*
- 13:30-15:00 **Individual WP session**
(WP1 in room LES OLIVIERS, WP2 in room LIPARI, WP3 in room MYKONOS)
- 15:00-15:30 *Coffee break*
and
EUG + ExCom meeting
(restricted to ExCom and EUG members. Room LIPARI)
- 15:30-17:00 **WP2** Plenary Session – Room *LES OLIVIERS*
WP leader: B. Grambow (Subatech/Armines)

- **Status of WP2**

Technical presentations

- Retention and mobility studies of safety relevant radionuclides in cementitious materials. – SURREY - JUELICH
- Uptake mechanisms of radionuclides in cementitious systems: insights from atomistic simulations. – JUELICH - SURREY
- Behavior of radium and strontium in contact with cementitious materials relevant for LILW disposal in the Czech Republic. – CTU
- Impact of the cement paste degradation on Ra-226 sorption. – RATEN
- Uptake and diffusion properties of HTO and inorganic C-14 through hardened cement paste: Influence of carbonation and water saturation. – SUBATECH/ARMINES
- Effect of redox conditions on sulfur, selenium and iodine binding in AFm phases. – EMPA - PSI – UNIBERN
- Building blocks on molybdenum retention processes in cement systems. Mo retention onto pure cement phases: Kinetic experiments. – AMPHOS21



17:00-17:15 *Coffee break*

17:15-17:30 **AG Presentation**

- Effect of radiation on leaching behavior of cement compounds. – Lomonosov Moscow State University

17:30-18:00 **Poster Session** (PhD presentation, 5 min each)

19:15 **Workshop dinner**

The Workshop dinner is organized at Les Machines de l'Île de Nantes (transport from Westotel to the dinner place is organized): <https://www.lesmachines-nantes.fr/en/>



Wednesday, April 18th, 2018

Place : Westotel

Rue de la Vrière, 34, La Chapelle-sur-Erdre, (France)

9:00-11:00 **WP1 Plenary Session** – Room TRIBORD

WP leader: E. Holt (VTT), F. Claret (BRGM) and U. Maeder (UniBern)

- **Status of WP1**

Technical presentations

- Benchmark status (overview of year 3 results of many partners). – VTT
- Experimental study of chemical degradation of cementitious materials in Boom Clay environment. – SCK-CEN + BRGM
- A decade of OPC-concrete-compacted FEBEX bentonite interaction under controlled THC conditions. – CSIC + CIEMAT + UAM
- Bonding and Hydro-mechanical Characterization of Interface Between Callovo-Oxfordian Claystone and a Low-pH High Performance Concrete. – LML + Andra
- Geochemical and Thermal Effects On Cementitious Materials Characteristics: Strength, pH of Leachates, Mineralogy, Diffusion. – CTU + UVJ
- The physico-chemical evolution of a low-pH cement in contact with ground water. – USFD
- Leaching of Hardened Portland Cement with various C/S -ratios. – VTT

11:00-11:30 *Coffee break*

11:30-13:30 **WP3 Plenary Session** - - Room TRIBORD

WP leader: A. Idiart (Amphos21)

- **Status of WP3** and **Modelling task**

Technical presentations

- Reactive transport modelling of radionuclides migration in the low pH cement/clay interface. – KIT
- Influence of water availability on the hydration of the Cebama reference mix. – AMPHOS21



- An extended membrane polarization model for spectral induced polarization of low-pH cement and concrete. – BRGM
- Electromigration of Se in Bentonite and Boom Clay: comparing model calculations and experimental results. – NRG
- Sensitivity analysis of a nonisothermal reactive transport model of heating and hydration concrete/bentonite column tests. – UDC
- Evaluation of diffusion experiments performed on cementitious samples in Czech laboratories within WP1 and WP2. – CTU

13:30-14:30 LUNCH

EUG (lunch + EUG meeting in a separate room) – *restricted to EUG members*

14:30-16:00h Topical session + Stakeholder panel discussion – Room TRIBORD

Chairperson: B. Grambow (Subatech)

Panellists:

- *Christine Georges (CEA, FR): Overview of CEA Decommissioning programs and associated R&D*
- *Marina Bottoni (EDF, FR): EDF applications for concrete and cementitious materials. Focus on radioactive waste packages.*
- *Ben Russell (NPL, UK): Procedures for Measurement of Radionuclides in Cement-Based Materials for Nuclear Decommissioning*

16:00-16:30 *Coffee break*

16:30-17:30 **EUG feedback + General Assembly – TRIBORD**

20:00 **Dinner at the hotel**