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Publication of proceedings based on the output from the WP1 workshop

DELIVERABLE (D-N°:6.8)

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Christophe Davies (EC) BELBaR participants		

Introduction

In the DoW the D6.8 is described as Publication of proceedings or special issue of a journal based on the output from the WP1 workshop. It was first submitted 27/2 2014, referring to that the output from the WP1 workshop was published on the BELBaR web. It was rejected with the motivation that www.belbar.eu was not accessible, and also that it was not enough that they were published on the project web, the proceedings should also be submitted to the EC.

Here is a new D6.8:

- The www.belbar.eu is accessible to the public, and the project presentations from the WP1 workshop are available on the public part of the BELBaR web.
- All presentations, agenda, list of participants and all accepted abstracts are submitted to the EC participant portal as D1.3
- The End user review board evaluation report from the first workshop will be submitted within days, as deliverable 6.5.

And:

The WP1 workshop took place in the beginning of March 2013, less than a year into the project. By the time of the WP1 workshop it was assessed not constructive to make a single collective peer reviewed publication based on the outcome from the workshop. According to the BELBaR communication plan (D6.4) all partners were responsible for having the outputs of their own work disseminated via peer-reviewed scientific publications. It was anticipated in the DoW that there would be at least one journal publication produced per participant during the project.

So **instead of a special issue of a journal based on the output of the WP1 workshop**, the D6.8 is now submitted with a list of articles based on results from the project, marked with status. The amount of published and accepted ones exceeds the ambition of one publication per participating organisation (which is 14). Some of the partners have not yet provided the coordinator with information on the status of their planned publications (grey in list), but this information will be submitted in the periodic and final reports. Not quite all partners have had an article published yet. This at hand, it is verified that at least 20 peer reviewed publications based on the results of the project are either published or accepted.

The ambition in D6.6 Publication plan of approximately 40 published articles is not yet reached, but that ambition is not unlikely to be reached in the near time after the end of the project.

List of publications:

#	Partner	Title	Authors	Suggested journal	Status
1	SKB / Posiva / RWM	Summary of the findings from BELBaR	Amy Shelton, Patrik Sellin, Mary Westermark, Lucy Bailey, Kari Koskinen, Seppo Kasa	MRS Proceedings	Planned
2	Ciemat	Colloid erosion from confined and compacted natural bentonites	Ursula Alonso, Tiziana Missana, Miguel García Guitierrez, Ana María Fernandez	Applied Geochemistry	Planned
3	Ciemat	Destabilization of montmorillonite colloids by addition of Alumina Nanoparticles	Natalia Mayordomo, Ursula Alonso, Tiziana Missana	Environmental Science & Technology	Planned
4	Ciemat	Size distribution of bentonite colloids upon fast disaggregation in low ionic strength water	Natalia Mayordomo, Claude Degueldre, Ursula Alonso, Tiziana Missana	Journal of the Geological Society	Planned
5	Ciemat	Transport of Uranium and Cesium in a granite fracture in the presence of bentonite colloids: effects of sorption irreversibility	Tiziana Missana, Ursula Alonso, Miguel García	Journal of Contaminant Hydrology	Planned
6	Ciemat	Irreversibility of cation adsorption from bentonite colloids	Tiziana Missana, Ursula Alonso, Miguel García	Applied geochemistry	Planned
7	UJV	Effect of grain size on the sorption and desorption of SeO_4^{2-} and SeO_3^{2-} in columns of crushed granite and fracture infill from granitic water under dynamic conditions	Videnská, K., Palágyi, Š., Štamberg, K., Vodičková, H., Havlová, V.	Journal of Radioanalytical and Nuclear Chemistry, DOI :0.1007/s10967-013-2429-7. 2013	Published. Available but not for free
8	UJV	Migration of ^{85}Sr in crushed granite in presence of bentonite colloids	Videnská K., Červinka R., Havlová V	Journal of the Geological Society	Accepted Will be available for free
9	UJV	Coagulation behaviour of clay dispersions in	Gondolli J., Červinka R.	Applied Clay Science	Planned

		simple electrolytes			
10	KIT	Montmorillonite colloids. I: Characterization and stability of suspensions with different size fractions	Knapp Karin Norrfors, Muriel Bouby, Stephanie Heck, Nicolas Finck, Rémi Marsac, Thorsten Schäfer, Horst Geckeis and Susanna Wold	Applied Clay Science 2015, 114, (0), 179-189	Published Available for free
11	KIT	Montmorillonite colloids. II: Dependency of Colloidal size on Sorption of Radionuclides	Knapp Karin Norrfors, Muriel Bouby, Rémi Marsac, Stephanie Heck, Thorsten Schäfer and Susanna Wold	Applied Clay Science doi:10.1016/j.clay.2016.01.017 online 2016, January, print later 2016	Published Available for free
12	KIT	Montmorillonite colloids. III: Influence of colloidal size on the sorption reversibility of radionuclides	Knapp Karin Norrfors, Muriel Bouby, Rémi Marsac and Susanna Wold	Applied Clay Science	Planned
13	KIT	A refined algorithm to simulate latex colloid agglomeration at high ionic strength	Henry Christophe, K. Karin Norrfors, Michal Olejnik, Muriel Bouby, Johannes Luetzenkirchen, Susanna Wold, Jean-Pierre Minier	Adsorption 2015, 1-13.	Published. Available but not for free
14	KIT	Results of two years erosion experiments performed on MX80 bentonite clay pellets of different compositions, under quasi-stagnant flow and glacial melt water type conditions	Muriel Bouby, Stephanie Heck, Thorsten Schäfer	Journal of colloids and Interface Science or Applied Clay Science	Planned
15	KIT	Accelerator Mass Spectrometry of actinides in ground-and sea-water: An Innovative method for the simultaneous analysis of U, Np, Pu, Am and Cm isotopes below ppq levels	Francesca Quinto, Robin Golser, Markus Lagos, Markus Plaschke, Thorsten Schäfer, Peter Steier, Horst Geckeis	Analytical Chemistry DOI: 10.1021/acs. analchem. 5b00980 2015, 87, (11), 5766-5773.	Published. Available but not for free
17	KIT	Influence of mineralogical and	Laure Delavernhe, Annett	Colloids & Surfaces A	Published.

		morphological properties on the cation exchange behavior of dioctahedral smectites	Steudel, Gopala K Darbha, Thorsten Schäfer, Rainer Schuhmann, Christof Wöll, Horst Geckeis, Katja Emmerich	Physicochemical and Engineering Aspects 2015, 481, 591-599.	Available but not for free
18	KIT	Pu, Np, Am transport under near-natural flow conditions at the Grimsel Test Site (Switzerland): Influence of earth-tide effects	Schäfer, T, Lagos, M, Hauser, W, Heck, S, Huber, F, Bouby, M, Quinto, F, Geckeis, H, Degueldre, C, Yamada, M, Suzuki, M, Kontar, K, Blechschmidt, I.	Environmental Science & Technology	planned
Additional	KIT	Hydration of Febex-Bentonite observed by Environmental Scanning Electron Microscopy (ESEM).	Friedrich F., Schild D., Weidler P.G., Schäfer T.	CMS Workshop Lecture Series 2016	Accepted Available for free
19	Posiva	Development of models for bentonite erosion within the BELBaR project	Kari Koskinen, Seppo Kasa	MRS Proceedings	Planned
20	VTT	Chemical erosion as a function of flow velocity and size of source – scaling study by modelling	Markus Olin, Kari Koskinen	Applied Clay Science	Planned
21	VTT	Influence of the sample preparation on MX-80 bentonite microstructure	Michał Matusewicz, Veli-Matti Pulkkanen, Markus Olin	Clay Minerals	Accepted Will be available for free
22	VTT	Microstructure of Na-montmorillonite	Michał Matusewicz, Jussi-Petteri Suuronen, Andrew Root, Markus Olin	tbd	Planned
23	VTT	NMR investigation of MX-80 microstructure (tentative)	Michał Matusewicz, Andrew Root, Markus Olin	tbd	Planned
24	VTT	Modelling bentonite behaviour in spent nuclear fuel disposal conditions (Dr. Sc.	Veli-Matti Pulkkanen		Planned

		(Tech.) Thesis)			
25	Clay Technology	Colloidal pastes, gels and sols: State diagrams of three different Na-montmorillonites	Emelie Ekvy Hansen & Magnus Hedström	Applied Clay Science	Under preparation
26	Clay Technology	Rheology measurements on montmorillonite gels	Magnus Hedström & Ulf Nilsson	Applied Clay Science	Planned
27	Clay Technology	Erosion of colloidal clay particles in Hele-Shaw cells	Emelie Ekvy Hansen & Magnus Hedström	J. Colloid Interface Sci.	Planned
28	Clay Technology	Thermoreversible behaviour in smectite clay gel	Emelie Ekvy Hansen and Magnus Hedström	Scientific Reports	To be resubmitted
29	JYU	X-ray imaging method for monitoring one-dimensional free swelling of bentonite	Tero Harjupatana, Jarno Alaraudanjoki and Markku Kataja	Applied Clay Science	In preparation
30	KTH	Prediction of swelling pressures of different types of bentonite in dilute solutions	Liu L.C	*Colloids and Surfaces A: Physicochem. Eng. Aspects*, 434, 303 – 318 (2013)	Published. Available but not for free
31	KTH	The Swelling pressure of Na-bentonite: Study with a density functional approach	Wang Z. and Liu L.C	*Chem. lett.*, 41, 1346 – 1348 (2012)	Published Available for free
32	KTH	Weighted correlation approach: An extended version with applications to the hard-sphere fluid	Wang Z. and Liu L.C	*Phys. Rev. E*, 86, 031115 (2012)	Published Available for free
33	KTH	Modelling bentonite erosion and comparison with experiments	Neretnieks I., Moreno L., Liu L		Planned
34	KTH	Counterion-only electrical double layers: an application of the density functional theory	Longcheng Liu	Journal of Chemical Physics http://scitation.aip.org/content/aip/journal/jcp/143/6/10.1063/1.4928508	Published. Available but not for free

35	KTH	A systematic comparison of different approaches of density functional theory for the study of electrical double layers	Guomin Yang and Longcheng Liu	Journal of Chemical Physics **142**, 194110 (2015). http://scitation.aip.org/content/aip/journal/jcp/142/19/10.1063/1.4921376	Published. Available but not for free
Additional	KTH	A weighted correlation approach of the density functional theory for an inhomogeneous fluid at an interface	Wang, Z	Doctoral Thesis URN: urn:nbn:se:kth:diva-119776ISBN: 978-91-7501-668-9OAI: oai:DiVA.org:kth-119776DiVA: diva2:612339	Published Available for free
36	B+Tech	Rheological Properties of Clay Material at the Solid/Solution Interface formed under Quasi-Free Swelling Conditions	Eriksson, R. & Schatz, T.	Applied Clay Science 108 (2015) 12-18	Published. Available but not for free
38	B+Tech	Response of montmorillonite suspensions to low frequency oscillatory shear	Eriksson, R. & Schatz, T.	Langmuir	In preparation
39	University of Manchester	The effect of humic acid on uranyl sorption onto bentonite at trace uranium levels	Peter Ivanov, Tamara Griffiths, Nick D. Bryan, Gospodin Bozhikov and Serguei Dmitriev	*J. Environ. Monit.*, 2012,14, 2968-2975	Published. Available but not for free
40	University of Manchester	Reversibility in Radionuclide/Bentonite Bulk and Colloidal Ternary Systems	Nick Sherriff, Ragiab Issa, Katherine Morris, Francis Livens, Sarah Heath and Nick Bryan	Min. Mag	Submitted October 2014
41	University of Manchester	Uranium dissociation from bentonite colloids, a kinetic investigation	Nick Sherriff, Francis Livens, Sarah Heath, Katherine Morris and Nick Bryan,	Environmental Science-Processes & Impact	In preparation
42	University of	Tri- and Tetra-valent actinide interactions with bentonite colloids	Nick Sherriff, Francis Livens, Sarah Heath, Katherine Morris	Environmental Science-Processes & Impacts	Planned

	Manchester		and Nick Bryan,		
43	Helsinki University	Batch sorption and spectroscopic speciation studies of neptunium uptake by montmorillonite and corundum	O. Elo, K. Müller, A. Ikeda-Ohno, F. Bok, A.C. Scheinost, P. Hölttä, , N. Huittinen	Geochimica et Cosmochimica Acta Reviewer's comments received in January. Will be resubmitted before the end of April 2016	Submitted, reviewed
44	Helsinki University	Migration of bentonite colloids and their influence on the mobility of Sr-85 and Eu-152 in granitic rock	P. Hölttä, S. Niemiaho and J. Lehto	Journal of Contaminant Hydrology/Physics and Chemistry of the Earth/ Radiochimica Acta	In preparation
45	Helsinki University	Radionuclide sorption on bentonite colloids	P. Hölttä, E. Puhakka, O. Elo, V. Suorsa, E. Honkaniemi and J. Lehto	Physics and Chemistry of the Earth/ Radiochimica Acta	In preparation
Additional	Helsinki University	Interaction of Radionuclides and Colloids Released from Materials Related to the Disposal of SNF – 14273.	Hölttä, Pirkko, Niemiaho, Suvi, Elo, Outi, Harjula, Risto and Lehto, Jukka.	2014 Waste Management Symposia, Vol. 40. ISBN (electronic) 978-0-9836186-3-8	Published Available for free
Additional	Helsinki University	Actinide (Np-237) sorption on montmorillonite and bentonite colloids.	Outi Elo	Master's thesis, University of Helsinki, Department of Chemistry (2014).	Published Available for free
46	MSU	Radionuclide sorption onto clay colloids	A.Yu. Romanchuk, S.N. Kalmykov	Radiochimica Acta/Geochimica et Cosmochimica Acta	In preparation