



DisCo Project Newsletter No.4, May 2020

Latest news

DisCo 3rd Annual Meeting

Due to the ongoing Covid-19 pandemic, the third annual meeting was held as a videoconference 23 April 2020. This was expertly arranged by Alba Valls and the rest of the team at Amphos 21. It was organised to fit in one day, which was tight, but everyone did a fantastic job at keeping to their allotted time. Thank you everyone, and especially Alba! See the short report from the meeting on next page.

Training at JRC

The group training event at JRC, originally planned for this spring in conjunction with the 3rd annual meeting, has been postponed. We will wait until JRC are back in normal operation before deciding for new dates. On a more positive note, the two individual training visits at JRC in 2019 went well, resulting in one employment at Eurecat, Spain (Jakub, working for our project!).

First scientific articles published

The first six DisCo papers have been published. Well done, DisCo team!

Check them out : <https://www.disco-h2020.eu/Home/SpecificInvestigation>

General progress

Experiments are ongoing, data are collected and analysed, models are built and tested and improved... Overall, during our third year, results are coming in and we have passed many important milestones. However, unfortunately there are some delays in preparation of some samples, and some dissolution experiments have not yet started at the time of writing. These delays, which were already realised before, have been exacerbated by the Covid-19 situation.

This means less data will be available for the modellers at this time; however, data are available from many experiments so we will be able to pass the important milestone of delivering DisCo data to WP5 to be used in the models.

We are now preparing the 2nd periodic report, which is a good time to take stock of our results and progress towards the project objectives. All things considered, it looks like we have come quite far, thanks to everyone involved!

Want to know more? www.disco-h2020.eu

Twitter: search #discoh2020.

Or email: disco@skb.se



LinkedIn Group: DisCo-H2020

SHORT REPORT from the DisCo 3rd Annual Meeting

Virtual DisCo in cyberspace

The third DisCo Annual Meeting took place in “cyberspace”, 23rd April 2020. It was very well organised by Alba Valls, A21 and all the A21 team. Before the meeting, separate videoconference meetings were organised for the ExCom, for the work packages and for the End User Group (EUG). The plenary session was attended by 61 people, representing beneficiaries, the EUG and Associate Group and the EC. See group photo next page!

Quick glance at results presented

All partner organisations presented their progress during the 3rd year. Due to the special circumstances, this year we only had one day of shorter presentations from all partners. Presentations indicated the following status: WP2: Cr-doped UO₂ pellets have been prepared using various methods and are now being used in dissolution experiments. Pu-doped samples are still to be finalised—but it is close! WP3: data from ca. one year leaching of MOX and Al, Cr-doped fuel were presented. These experiments are ongoing. A few experiments have yet to start. Preliminary data so far indicate Al,Cr-doping does not have a significant effect on dissolution rates. WP4: Systematic corrosion studies are ongoing at several laboratories. Preliminary data indicate that density of samples have an



Working with dissolution experiments in controlled atmosphere using a glove box, at VTT

effect on dissolution rates. Effects of different leachants (bicarbonate water, young cement water) are also being investigated, as some differences in normalised dissolution rates are observed. WP5: Thermodynamic models presented show that Cr-doping should have minimal effect on oxygen potentials. Dissolution models including the oxidant-scavenging effects of H₂ and Fe were presented. Some selected experimental data from DisCo have been used in the modelling exercises, showing that models are able to reproduce the data quite well.

Training and mobility measures

The 3rd Webinar (recorded, see web page) was given by Jordi Bruno (A21, Spain) on the subject “Spent fuel model development and testing in natural analogue systems”. Training at JRC, planned for spring 2020 is postponed; hopefully we can realize the planned training this autumn. No mobility measures were used this year; it will reserved for representatives of the AG to attend the final meeting next year.

Proceedings AM3 & next meeting

The proceedings from the 3rd Annual Meeting will be available in September. The next meeting will be held in Barcelona in the spring of 2021. See DisCo web page for details.



Leaching – 10 bar H₂ at pH 8.5 or pH 13.5

Autoclaves for anoxic leaching at SCK CEN.

Group ScreenShot from the DisCo 3rd Annual Meeting

We didn't catch all attendants on their screens ...but most of you.

THANKS everyone for adjusting to the special circumstances and for your great contributions to our project!

Say cheese! And stay safe, wherever you are!

