

Durham X-ray Absorption Facility (DXAF) – Newsletter December 2023



Welcome to the DXAF newsletter for December 2023. As this is the final newsletter of 2023, the facility would like to thank yourselves for your immense support during this year! As we tie down this year, we wanted to give a very brief update on what is going on with the facility.

What has been going on?

In situ reactions have been running

With our new cell up and running, more users have been conducting experiments using the *in situ* cell. Hopefully as the months go by more and more users will have the chance to get their hands on some *in situ* XAS data!

Maintenance and more maintenance

DXAF has been conducting some essential works to maintain the instruments in our line-up. This unfortunately means some downtime of the instrument which will run into the start of January. Your patience with the service is greatly appreciated and hopefully the facility will be back to full working capacity in no time!

Spotlight! Using lab based XAS to prepare for the synchrotron.

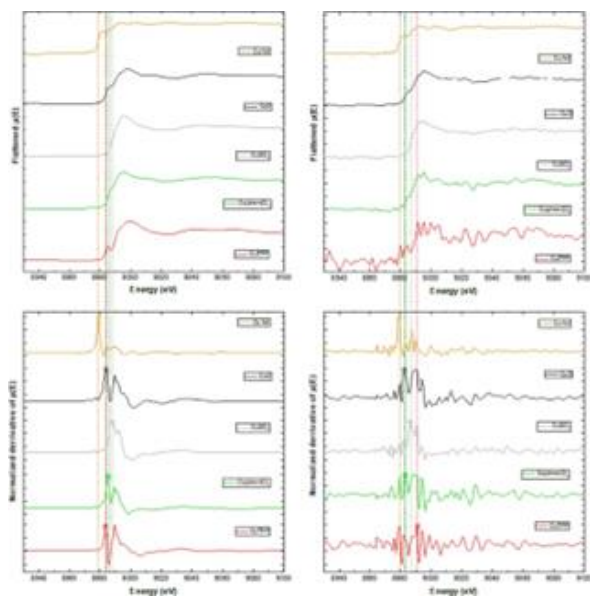


Fig. 1: Comparison of XAS data from paper of Stańczyk *et al* described in the spotlight.

An interesting study of Cu(II) complexes by Kwiatek group. The group conducted a direct comparison of lab-based XAS with synchrotron collected data and discussed about the how lab-based XAS can be used to screen samples prior to synchrotron work, the significance of counting statistics and how comparative oxidation state information can be collected from samples with unsatisfactory signal-to-noise ratio

<https://doi.org/10.1016/j.nimb.2023.165100>

If you would like to spotlight some of your XAS work in the upcoming newsletters , please get in touch with the facility!

What is coming up?

DXAF is still looking to perform more *in situ* and *ex situ* samples so please get in touch! We are still looking at the development of new *in situ* and *operando* cells so please get in touch if there is any particular set up which may be of interest to you! Please go to our website or contact us using the details below.

Have a joyous festive period and DXAF will see you in 2024!

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Useful links:

EasyXAFS Website: <https://www.easyxafs.com/>

CONEXS Website: <https://research.ncl.ac.uk/conexs/about/>

DXAF Website: <https://www.durham.ac.uk/research/institutes-and-centres/dxaf/>

Stańczyk *et al* paper: <https://doi.org/10.1016/j.nimb.2023.165100>