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Type : Oral

KOALA - a single-crystal Laue neutron diffractometer: potential for advanced chemical crystallography realised.

Our chemistry community participated generously in the workshops which led to the commissioning of the first suite of neutron beam instruments at ANSTO's OPAL reactor. That community has now become a core group of users of the KOALA diffractometer which has resulted in studies which have underpinned superb publications. Whether it is the careful systematic work required to validate the new methodologies of quantum crystallography (a recent search of the Cambridge data base reveals that a single KOALA user has published 10% of all the original single-crystal neutron diffraction studies reported across the life of KOALA) or the one-off determinations required to convince high impact journals that the case for a novel geometry, oxidation state or formulation is proven.

At the time that KOALA was commissioned, the publication of new single-crystal neutron diffraction studies of molecular systems had fallen to a low point and KOALA has been part of the modest resurgence of this niche but important pursuit.

KOALA has been in use across a time where scientific publishing is in turmoil, with the rise of paid open access, publication fees, payment to feature on covers are perturbing the decisions about where users can afford to seek to publish.

A major step forward in the productivity from KOALA has been the creation of the LAUEG software suite by Ross Piltz. This facilitates users extracting data efficiently and has facilitated the publication of neutron single-crystal studies with the first announcement of chemical breakthroughs, rather than following in separate papers which are rarely cited.

A review of the output from KOALA will demonstrate where we hope KOALA2 can take us.

Level of Expertise

Expert

Presenter Gender

Woman

Pronouns

Which facility did you use for your research

Australian Centre for Neutron Scattering

Students Only - Are you interested in AINSE student funding

Do you wish to take part in the Student Poster Slam

Condition of submission

Yes

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