THE EUROPEAN NEUTRON SOURCE

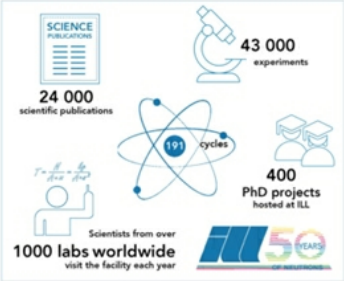
ILL newsletter

July 2021

Consult our web site and follow us on Twitter !

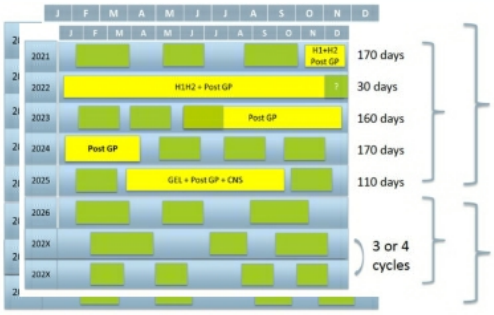
Those users who can come to the ILL for their experiments must carefully read and follow the working procedures and practical issues for visitors on site.

GENERAL NEWS



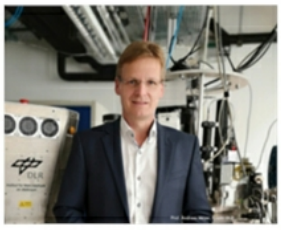
The ILL prepares to celebrate 50 years of neutrons!

On 31 August 1971 the ILL high-flux reactor delivered its first neutrons for the first time and reached full power in December that year.
The ILL was a “user facility” from the very start with neutron guides enabling a large number of instruments to be operated: for 5 decades about 1400 researchers from over 40 countries visit the ILL every year to perform more than 600 experiments.
The ILL has been a flagship centre for neutron science since its inception, with constantly upgraded source, instrument suite and services continuously enabling cutting-edge science and innovation. Today the institute is looking resolutely to the future with its latest modernisation programme “Endurance”.



The ILL20-23 programme

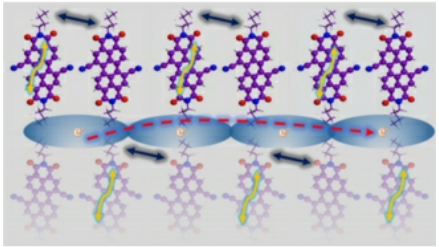
… is a major programme of maintenance and upgrade work for Reactor Division, Endurance and other projects, which entails several longer shutdowns. ILL20-23 ensures effective coordination of projects.
The renewal of the H1-H2 beam tube and the delivery of a number of major Endurance guide and instrument projects are the objective for the forthcoming shutdown spanning most of 2022.
The 10-year re-qualification of the Reactor Vessel project also fell within ILL20-23, and was successfully completed in January 2021.
As ILL20-23 is delivered, the ILL will progressively complete phases of modernisation focussed on maximising the availability of neutrons, instruments and services for the European user community.



Andreas Meyer to be the ILL's next German Associate Director

We are pleased to announce that Prof. Andreas Meyer is to join the ILL as German Associate Director of the Institute and Head of the Projects and Techniques Division (DPT) from 1st October 2021. Prof. Meyer is an expert in the application of neutron scattering to materials science, focusing in particular on the dynamics and structure of melts at very high temperatures and close to the glass transition.
Read more

HIGHLIGHTS AND SCIENCE NEWS

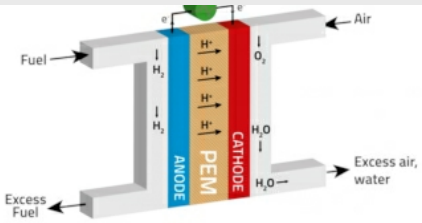


Identifying molecular processes involved in the electrical conductivity aspects of organic semiconductors

Organic semiconductor-based electronic devices offer societal and industrially relevant advantages over more commonly used inorganic ones: they are low-cost, have limited toxicity and are easy to synthesise and process. Crucial to improving efficiency is understanding their fundamental behaviour at the microscopic level. Recent work has examined the role of the inherent disorder in organic molecular crystals with regard to their electrical conductivity and has recently been published in Advanced Materials.
Read more

Improved polymer electrolyte membranes for clean energy devices

With the goal to reduce carbon emissions, substantial research is being directed at developing



novel materials and hierarchical structures for energy harvesting, storage and conversion devices. Key to many of these applications is the development and optimisation of ion-selective membranes that are, for example, critical for creating the next generations of fuel cells and separation devices. In a recent joint publication, scientists from universities and large scale facilities show how innovations in neutron scattering are enabling researchers to create and test new Polymer Electrolyte Membrane (PEM) formulations for clean-energy applications.
Read more

MORE HIGHLIGHTS HERE !

A SELECTION OF RECENT ILL PUBLICATIONS

NEWS FOR USERS

The ZAC operational from 1 July

The fence around the new controlled access zone (ZAC) is now complete. Access to the ZAC will be possible with a badge programmed for the duration of your stay, in a way very similar to what exists today. However , **your badge will be programmed in two steps as from 1st August this year**. Upon arrival, you must stop at the site entrance as usual to get a badge which gives access to all buildings on the campus outside the ZAC. Then you must go the ZAC main entrance (new reception building ILL50, ground floor) where your badge will be programmed to enter the ZAC.
Reception at the ZAC entrance is open during the week until 7pm, Monday to Saturday, but closed on Sundays. It will still be possible to enter the site at night and on Sundays and go to the Guest House for example.

User offices for instrument remote control

In the new reception building of the ZAC we have provided **offices for instruments in the reactor building**. These will provide a more comfortable working environment for visiting scientists, who will be able to benefit from the now familiar remote access capability. The offices are located on the first floor of ILL50, opposite the new User Office.

The Partnership for Soft Condensed Matter (PSCM) has a new website!

The PSCM laboratories and instruments are available to all ILL and ESRF soft matter users to whom beam time has been allocated through the appropriate ILL or ESRF peer-review procedures. The PSCM facilities allow users to prepare and characterise samples during their periods of beamtime and facilitate the performance of complementary measurements on site. Users who need the facility in conjunction with neutrons or synchrotron radiation measurements should indicate this in their beamtime proposals. The PSCM labs are also permanently accessible to on-site ESRF/ILL staff members working on their in-house research projects. Visit the new website to learn more about it.

Previous issues of the ILL newsletter

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