



The ILL at ICNS 2025

The International Conference on Neutron Scattering ICNS 2025 was held in Copenhagen (Denmark) and Lund (Sweden) from 7 to 10 July. Among the over 750 participants, 66 were from ILL - a strong and active participation with oral presentations, poster contributions, many interesting discussions and some prizes. The event closed in Lund with an ESS visit. It has been announced that ECNS2027 will be held in Grenoble. [Read more](#)

ILL in Focus

Operation news

Reactor cycle number 197 at the ILL ended on 7 July 2025. For two months, 964 scientists from 37 countries conducted over 665 experiments. The 2024-2025 inter-cycle shutdown was a busy period, with the completion of a number of large projects necessary to comply with the ever more stringent safety regulations. The projects included, among many others, installation of a new fire sprinkler system for the reactor building, refurbishment of the polar crane, and reinforcement of neutron guide casemates. The next cycle will start on 26 August 2025 and will run until 28 October.



Key dates for the Autumn 2025 proposal round

Proposal submission deadline: **15 September 2025, midnight**
Subcommittee meeting: **4-5 November 2025**
Scientific Council meeting: **6-7 November 2025**

First users on SHARPER, ILL-CRG

The first user measurements on SHARPER were carried out by PhD student Phillip Eckstein, working on a joint ILL-DLR (German Aerospace Centre) PhD project. The study explored atomic dynamics in a viscous liquid to probe links between structural relaxation and mass diffusion. A highlight was the use of a new aerodynamic levitator for containerless measurements on molten materials. SHARPER, a CRG instrument built by the Léon Brillouin Laboratory, began operation in ILL's second 2024 reactor cycle. It is now the highest-flux, crystal time-of-flight spectrometer with time focusing. [Read more](#)



The ILL Science Strategy

The recently published ILL Science Strategy outlines the approach that will be taken to leverage the ILL's extensive instrument and facility upgrades. Developed with input from a panel of external experts, it provides a vision for scientific operation for the coming decade, reflecting a balance between consolidating existing strengths and establishing new structures and mechanisms to support emerging scientific areas of societal importance. Among the most important new structures are the four Science Hubs of which the first two are now being established with the ongoing recruitment of the Science Hub Coordinators for Li-ion Batteries and Advanced Manufacturing. The Science Strategy will serve as a guide for resource allocation, demonstrating and strengthening ILL's importance to European science and innovation, and supporting political decisions on the future European neutron landscape. [Read more](#)



ITM and ILL Extend Collaboration on the Manufacturing and Supply of Medical Lutetium-177 Radioisotope

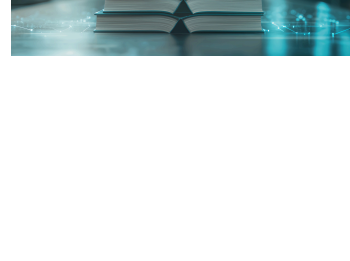
On 16 June, Isotope Technologies Munich SE (ITM) and ILL announced an extension of their collaboration for medical radioisotope production, originally established in 2009. ITM will receive priority access to half of the available neutron irradiation capacity available at the ILL for the production of non-carrier-added Lutetium-177 (n.c.a. ^{177}Lu), a critical medical radioisotope used for radiopharmaceutical therapies for cancer treatment and diagnosis. [Read more](#)



Recent science news

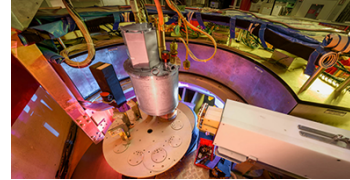
JEFF4: a major step forward in nuclear data for science and applications

The Joint Evaluated Fission and Fusion (JEFF) Library combines and makes available the experimental and theoretical knowledge on nuclear reactions and decays. It is the result of an international collaborative effort led by the Nuclear Energy Agency Data Bank, ensuring the scientific quality, transparency, and usability of data for a wide range of applications - including reactor design, safety assessments, fusion research, medical isotope production, space and earth exploration, and nuclear science. The JEFF-4.0 library, released in June 2025, represents a significant achievement for the nuclear data user community. The ILL gave a major contribution, over many years, to the success of this project, benefiting from the quality of its wide range of instruments. [Read more](#)



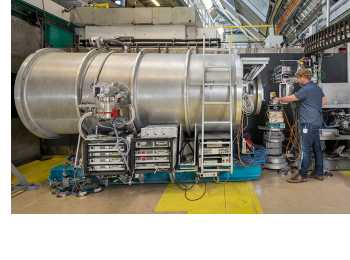
Turbocharging solid-state battery research: real-time insights unlocked by new sample cell

The EU's 2050 net-zero goal makes batteries key for clean mobility and renewable energy storage, and neutron techniques are a powerful tool to advance understanding in this rapidly growing field. Solid-state batteries are emerging as a promising successor to lithium-ion offering higher energy density, improved safety, and longer lifespan. Solid-state battery research has just been turbocharged by the development of the first sample cell that unlocks the unique real-time insights of operando neutron diffraction at the ILL. This major advancement is the result of a collaborative effort between the ILL and LEPMI laboratory in Grenoble within the framework of the OplnSolid project funded by the French National Research Agency (ANR). [Read more](#)



Not to be brushed off: pushing molecular limits with neutron reflectometry

Polymer brushes are dense arrays of polymer chains tethered to a microscopic surface. They have a versatile application potential, including as sensors of blood glucose levels. For this, polymers changing shape in response to changes in their environment are of particular interest. The characterisation of such fast, small-scale molecular transitions with high spatial and temporal resolution requires complex setups and non-invasive techniques. Thanks to a recent upgrade, ILL's neutron reflectometer D17 can track molecular motion with unprecedented precision. The results from a study as a function of temperature and glucose concentration of PNIPAM chains attached to silicon wafers have just been published. [Read more](#)



Crystal clear: using neutrons to tackle a fundamental biotechnological challenge

ILL instruments [D33](#), [IN16B](#) and [WASP](#) played a crucial role in a study aiming to disentangle complex protein crystallisation pathways. A team of ILL researchers and their collaborators from Tübingen (Germany) and Lund (Sweden) used a multimethod approach to obtain detailed insights into the pathways underlying the crystallisation of the protein human serum albumin (HSA). Looking beyond purely fundamental research, this neutron-based knowledge is of crucial importance for pharmacological and medical applications. [Read more](#)



Awards

Juan Rodriguez Carvajal was awarded the ENSA Walter Hälgl Prize for his extraordinary impact on the field, namely as the 'father of FullProf', the globally renowned software for crystallographic and magnetic studies. Juan Rodriguez-Carvajal is not only an exceptional scientist with profound instrumental expertise, but also possesses deep insight into the underlying physics of neutron scattering, particularly in the realm of strongly correlated materials.

Iurii Kibalin has been awarded the Neutron Instrumentation and Innovation Award 2025 for his significant impact on polarized neutron diffraction techniques. His development of the CrysPy software tool has transformed polarized neutron powder diffraction on magnetic samples into a routine, accessible method for a broad scientific community.

Valentin Czamlar received the 2025 Best PhD Thesis Award for his impactful research on very cold neutrons (VCN), conducted within ILL's Nuclear and Particle Physics group. Now a postdoc at LPSC in Grenoble, Valentin continues his work through experiments at ILL.



Events

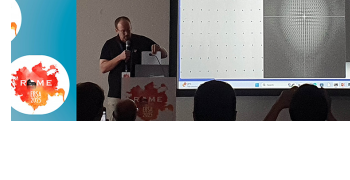
Journées de la Diffusion Neutronique (JDN)

From 2 to 5 June 2025 the JDN gathered the French neutron scattering community by the Lake of Annecy. The programme featured diverse scientific talks spanning condensed matter, biology and instrumentation. The event also included sessions on inclusion, accessibility, and collaboration among research infrastructures. [Read more](#)



15th European Biophysics Congress

Several ILL and EPN campus scientists (including Juliette Devos, Lukáš Gajdoš, Mark Tully, and Frank Gabel) attended the EBSA 2025 conference in Rome, contributing talks, chairing sessions, and presenting posters on topics including biophysics and neutron techniques, and the Deuteration Lab facility.



FANs 2025

A practical training course organized by 2FDN (the French Federation for Neutron Scattering) and ILL introduced researchers to neutron scattering techniques in condensed matter through theoretical classes and hands-on experiments, offering two tracks - hard matter and magnetism, or soft matter and biology - with practical sessions in various neutron scattering methods.



Soft Matter Summer School 2025

The school provided over 40 doctoral students with an overview of the forces in soft matter systems and key probing techniques through lectures and poster sessions for discussion of existing and potential research topics. A well appreciated event organised this year again at the EPN campus, with a prestigious list of speakers.



Calendar

22 February - 29 March | HERCULES school - On-line application open from 25 August to 1 October. [hercules-school.eu](#)

2-30 September | X-Ray and Neutron Science - International Student Summer Programme at ILL/ESRF

20-24 October | DENIM 2025 - Design and Engineering of Neutron Instruments Meeting.

27-31 October | Second Edition: School on Neutron Diffraction Data Treatment using the FullProf Suite.

16-17 December | StereoXN : A stereo approach to elucidating complex fluids at the nanoscale with Neutrons and X-rays.

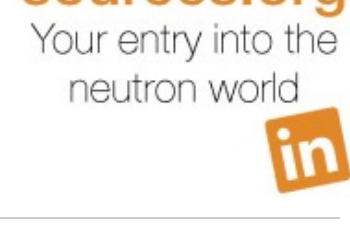
Connect with the Global Neutron Community on LinkedIn!

Join the Neutronsources LinkedIn [page](#) and keep up-to-date:

- News from neutron facilities and research around the world

- Info on job openings, event announcements and more

(including a digest from the neutron mailing list <https://lists.neutronsources.org/mailman/listinfo/neutron>)



www.ill.eu

communication@ill.eu

To unsubscribe follow instructions [here](#)