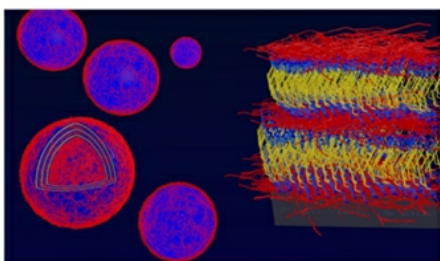




Consult our [web site](#) and follow us on [Twitter](#) !

Important information for users: The current reactor cycle is running until 4th August. Two more cycles will follow until the end of the year. **Easy Access** requests for short measurements and **DDT requests** for full experiments to be performed as soon as possible can be submitted at any time. The normal call for proposals (see below) is in September.

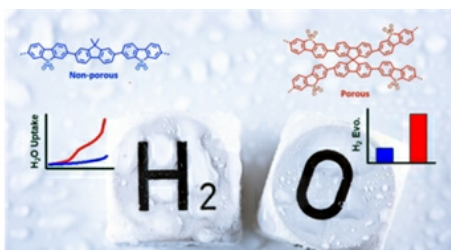
SPOTLIGHTS ON SCIENCE



A single-step approach for complex coatings

Smart coatings are special films tailored to sense and respond to changes in their environment pH, humidity, temperature, light or the presence of specific molecules. Multi-layered coatings are an excellent example of these, with great potential for use in the biotechnology industry. They are thin films composed of distinct alternating layers of at least two components. Neutron experiments at the ILL have shown how multi-layered functional coatings can be produced in a simple, single-step procedure.

[Read more](#)



Exploring water-splitting photocatalysts with neutrons

Solar hydrogen can be produced from water and light in a process called photocatalytic water-splitting; this could help mitigate the impact of climate change, as no fossil fuels are used in its production. Unlike inorganic photocatalysts (most active under UV radiation), organic photocatalysts can be synthetically modified under low-temperature synthesis conditions to be active under visible light radiation, the most abundant component of natural sunlight. Conjugated microporous polymers (CMPs) are very promising organic photocatalysts. ILL scientists, along with UK colleagues, have decided to explore the exact role of the CMPs' pore networks in the photocatalytic process.

[Read more](#)



News from neutron-antineutron oscillations

Any observation of neutrons oscillating into antineutrons, even with a vanishingly small probability, would violate the law of conservation of baryon number and constitute a scientific discovery of fundamental importance for physics and cosmology. The experimental fact that today's universe consists mainly of matter provides a strong hint that this law might be violated in nature: if the baryon number is strictly conserved, matter and antimatter formed during the Big Bang in equal quantities should have been annihilated. In a recent PRL publication, an ILL team has proposed an experimental method promising to significantly increase the sensitivity of experiments searching for neutron-antineutron oscillations.

[Read more](#)

[MORE HIGHLIGHTS HERE !](#)

NEWS FOR USERS



Free "Gold open access" publications

As part of the FILL2030 project, the ILL will be financing about 40 publications with "gold open access" status by the end of 2020. Please fill out this short [form](#) to request an open access grant.

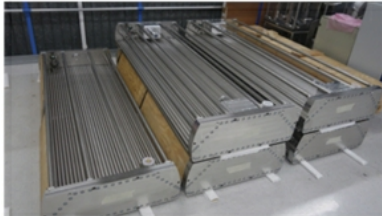
The funding will run on a 'first come, first served' basis. Check out the reminder note on requirements for ILL publications: [what you need to know](#).



Call for proposals

The next deadline for standard proposal submission is **16 September 2019** (midnight European time). The web system is now open all the year round. Proposals must be submitted via the Electronic Proposal Submission (EPS) system on our [User Club](#). If you have any problems, you will receive full support from the User Club team. Accepted proposals will be scheduled during one cycle before summer 2020. There will be another call in Spring 2020 for a second cycle after summer 2020.

Read the [detailed information](#).



PANTHER available for ILL users

The new thermal time-of-flight spectrometer will provide first neutrons for the user programme in 2020 - proposals can be submitted in September. Position-sensitive detectors (PSD) now cover a solid angle of 2 steradians, up by a factor of 3 compared to IN4, and will allow work on single crystalline samples. Further gains are expected from the improved optics, including a variable double-focusing graphite monochromator and wider straight-slit Fermi chopper. PANTHER was built in the framework of the current ILL instrument upgrade programme ENDURANCE phase I.

Read more about the instrument [here](#).

FROM NOW ON, THE EASY ACCESS SYSTEM (EASy) GRANTS BEAMTIME:

- 1** TO ALL INSTRUMENTS, EXCEPT THOSE IN THE NUCLEAR & PARTICLE PHYSICS GROUP
- 2** ALL YEAR LONG, WITHOUT PROPOSAL ROUND NOR PEER REVIEW SYSTEM
- 3** FOR RAPID MEASUREMENTS, WHICH EXEMPTS USERS FROM TRAVELLING TO THE ILL
- 4** TO SCIENTISTS FROM AN ILL SCIENTIFIC MEMBER COUNTRY

Quick access needed ?

We remind you that for urgent beam time requirements - for example 'hot science' or experiments to complete work relating to research or thesis contracts - we strongly encourage you to apply for **Director's Discretionary Time (DDT)**.

EASy access is also possible all year for testing samples, completing experiments and performing one-off measurements to contribute to publications. Explore all the [other routes](#) for getting beamtime.

Outreach for new users: Limited beam time access for new users from non-member countries will also be available via the FILL2030 EU project. Proposals will be evaluated via the regular panel meetings. For more information please contact the ILL user office.



ILL publication policy and good practices

All users participating in experiments are obliged to comply with the [ILL publication and data policy](#). They are asked to commit to this when submitting their proposal. If the results of your experiment are going to be published you must give proper credit to ILL staff members who participated in the experiment and proper mention of the ILL facilities used (preferably on the first page).

Read about [ILL publications good practices](#).

[Previous issues of the ILL newsletter](#)



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