



ILL newsletter

JANUARY 2020

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SCIENTIFIC HIGHLIGHTS **WASP** LENS PROPOSAL DEADLINE EASY ACCESS & DDT

SPOTLIGHTS ON SCIENCE



Key protein molecules associated with the unique water purification properties of Moringa seeds

Moringa seed extracts have been used for centuries to help purify water in regions where clean water is not available. The seed extracts can separate unwanted particulates from water, sedimenting impurities. They also have potential as an antimicrobial treatment. Researchers have used neutrons and x-rays to identify and characterise the key proteins underlying the unique water purification properties of Moringa seeds. This information may allow better use of this abundant resource.

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Scientists take big step towards making the perfect head of beer

An ILL experiment performed by researchers from the University of Manchester solved a stubborn mystery about the lifetime of foams by explaining how foams produced using multiple additives – like those used in commercial products – behave. Their findings allowed the researchers to determine a correlation relating the stability of foam films (the building blocks of the foam bubbles) to how the additive molecules arrange themselves on the bubble surface. The applications of this research could include producing beer with a head that lasts all the way down to the bottom of the pint glass, as well as better household products, including laundry detergents, which minimise irritating foaming. It could also be used to develop more effective fire-fighting foam.

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GENERAL NEWS



The landscape is shifting for Europe's world-leading neutron science community

Three neutron research reactors in Europe were permanently shut down in 2019. The League of advanced European Neutron Sources, LENS, and the European Neutron Scattering Association, ENSA, are warning of a "neutron gap" that could impact scientific research across multiple fields in physics, materials science, chemistry, biology, medical science and engineering. Together, LENS and ENSA are working on a new vision to maintain Europe's leading position in neutron science

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NEWS FOR USERS

Proposal round

The next deadline for standard proposal submission is 17 February 2020 (midnight Central European Time). The online system is now open all 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 (club@ill.eu). Accepted proposals will be scheduled in autumn 2020.

[For detailed information](#)

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 new spin-echo spectrometer **WASP** (available to users from January 2020) will offer a very large gain in count rate. It will therefore be possible to perform much shorter experiments than before (2-3 days), including measurements via the Easy Access route.

NeXT

The Neutron and X-ray Tomograph – will also be available to ILL users as of this proposal round. This novel imaging facility enables neutron imaging at high temporal resolution (as fast as 1.5s per tomographic scan), high spatial resolution (a few micrometers) and for the simultaneous acquisition of x-ray images.

Call for proposals for experiments at the ILL H7 site

The ILL operates a research reactor with a compact core and 57.8 MW nominal nuclear power. It currently hosts the antineutrino detector STEREO [JINST 13, P07009 (2018)] at the H7 position. From autumn 2021 onwards, the H7 site will be available for new projects. The ILL is inviting proposals for experiments at the H7 position. The deadline for proposal submission is 16 February 2020.

[Read more](#)



New procedure for accessing the ILL reactor building (Level C)

From now on, all persons wishing to access the reactor building must undergo a security screening process (known as 'criblage' in French) which could take up to about three weeks. This means that visitor access requests involving access to instruments or equipment inside the reactor building must be submitted more than three weeks in advance. The procedure will be fully-operational by the end of 2019.

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