Fascinating research, or “what are they actually doing there?”

In these pages, we would like to present the Paul Scherrer Institute to an interested public in a generally comprehensible way. Here you can learn more about the research topics we are working on and the unique large-scale facilities we are using to find answers to a variety of scientific questions.

Nanometres in 3D

Scientists at the Paul Scherrer Institute and ETH Zurich have created 3D images of tiny objects showing details down to 25 nanometres. In addition to the shape, the scientists determined how particular chemical elements were distributed in their sample and whether these elements were in a chemical compound or in their pure state.

Gasoline beats mining

Until it was banned, leaded gasoline dominated the manmade lead emissions in South America

Leaded gasoline was a larger emission source of the toxic heavy metal lead than mining in South America – even though the extraction of metals from the region’s mines historically released huge quantities of lead into the environment. Researchers from the Paul Scherrer Institute PSI and the University of Bern have discovered evidence of the dominance of leaded gasoline based on measurements in an ice core from a Bolivian glacier. The scientists found that lead from road traffic in the neighbouring countries polluted the air twice as heavily as regional mining from the 1960s onwards. The study is to be published in the journal Science Advances on 6 March 2015.

Prepared for the SwissFEL

For many years, PSI researchers have been testing experimental methods that will provide insights into novel materials for electronic devices. Using a special trick to make the Swiss Light Source (SLS) at PSI generate light with similar properties to that of PSI’s x-ray laser SwissFEL, the researchers were able to demonstrate that the experiments planned for SwissFEL are possible and they are now building an experimental station
PSI expertise boosts research for the energy transition

Researchers from the Paul Scherrer Institute (PSI) are involved in several projects under the new National Research Programme "Energy Turnaround" (NRP70) of the Swiss National Science Foundation (SNSF). The PSI experts tackle issues such as particle emissions from wood heating systems, the holistic evaluation of energy systems and the production of semiconductor components for novel transformers.

Neuer Laser für Computerchips


This news release is only available in German.

Batman lights the way to compact data storage

Researchers at the Paul Scherrer Institute (PSI) have succeeded in switching tiny, magnetic structures using laser light and tracking the change over time. In the process, a nanometre-sized area bizarrely reminiscent of the Batman logo appeared. The research results could render data storage on hard drives faster, more compact and more efficient.

Keeping geothermal energy on the table

A study by the Centre for Technology Assessment TA-Swiss, coordinated by the Paul Scherrer Institute, recommends further pursuing deep geothermal energy in Switzerland. The energy resources underground are vast, environmentally friendly to extract and available around the clock, the authors conclude. The earthquake risk and the cost of electricity production, which are still too high, however, remain challenges that society needs to weigh up against the advantages of deep geothermal energy.

Shortcut to protein portraits

All living organisms, from bacteria to humans, rely on proteins to perform their vital functions. How these proteins accomplish their tasks depends on their structure. Researchers from the Paul Scherrer Institute have now devised a novel method to determine the crystal structure of proteins using X-ray light, which could also hasten the development of new drugs in future. The study will be published in the journal Nature Methods on 15 December.
Biomasse als Stütze der Energiewende

Mit 80 Teilnehmerinnen und Teilnehmern fand am 2. Dezember am Paul Scherrer Institut PSI die erste Jahreskonferenz des Kompetenzzentrums des Bundes für Bioenergie (SCCER BIOSWEET) statt. Das im Rahmen des Aktionsplans Energieforschung Schweiz gegründete Kompetenzzentrum definierte in der Tagung die Ziele, Strategien und Positionierung der Bioenergie-Forschung vor dem Hintergrund der neuen schweizerischen Energiepolitik.

This news release is only available in German.

New method for iodine retention in the nuclear power plant venting filters faces crucial tests

These days, the Federal Office of Public Health distributes iodine tablets to the population living close to the Swiss nuclear power plants (NPP). The dispensing of iodine tablets within a radius of, now, fifty kilometres around NPP sites is aimed at protecting the residents from contamination with carcinogenic, radioactive iodine in the event of a severe nuclear accident. To make sure that as little radioactive iodine as possible gets into the environment as a result of a nuclear accident, researchers from the Paul Scherrer Institute PSI have for many years been developing a method that can be used in containment venting filters.

SwissFEL ready for assembly

Researchers from PSI have spent the last four years developing key technologies for the X-ray laser SwissFEL and subjecting them to the acid test in the injector test facility. Now that the development programme has drawn to a close, the installation of the new large-scale research facility is due to get underway in early 2015.

Ist dies der richtige Zeitpunkt für ein waghalsiges Experiment?

PSI-Direktor Joël Mesot hat sich heute in der Aargauer Zeitung mit einem Gastkommentar zur Debatte um die Ecopop-Initiative geäußert. Lesen Sie hier seinen vollständigen Text.

Das Kompetenzzentrum Speicherung zieht nach einem Jahr Bilanz


This news release is only available in German.
When thawing glaciers release pollutants

Media Releases Energy and Environment

As glaciers increasingly melt in the wake of climate change, it is not only the landscape that is affected. Thawing glaciers also release many industrial pollutants stored in the ice into the environment. Now, within the scope of a Swiss National Science Foundation project, researchers from the Paul Scherrer Institute (PSI), Empa, ETH Zurich and the University of Berne have measured the concentrations of a class of these pollutants – polychlorinated biphenyls (PCB) – in the ice of an Alpine glacier accurately for the first time.

Competitive thanks to high pressure

Industrial co-operation

Various basic materials for the chemical industry are manufactured using technology developed by the Ticino based company, Casale. The chemical compounds produced serve to make products like synthetic fertilisers or Plexiglas. In co-operation with PSI, Casale aims to make these production processes even more efficient as basic chemical products are export goods that face stiff competition around the globe. Tiny differences in production costs can be decisive when it comes to which licence a plant operator goes for.

Older news can be found in the overview 2014.

For media representatives

Are you a journalist and do you have general questions about PSI? Are you looking for images for an article on a research topic? PSI has an extensive photo archive from which we can send you appropriate material upon request. We will be happy to assist you in your search for scientists who, as neutral experts, will respond to your technical questions. Please get in touch with our contact for media representatives:

- Media contacts
- Press releases
- Media mailing list

For the general public

If, after visiting our Website, you would really like to know what our daily work routine is like – come and visit us. In the psi forum visitor’s centre, we welcome adults and teenagers, either individually or in groups. Homepage psi forum

For parties of 12 persons and over, we offer a free-of-charge tour through our large-scale facilities, and for students we have founded the student laboratory iLab. School classes can visit us free of charge for a day, carry out experiments in the laboratory and then see from the large-scale facilities how the scientific principle studied at iLab is applied in routine research. Homepage iLab

URLs: