The Training Catalogue for Photon and Neutron Data Services DOI 10.5281/Zenod0.6491949

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The Catalogue: pan-training.eu



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Content Providers

Content providers are entities (such as academic or research institutions, nonprofit organisations, portals etc.) that provide training materials of relevance to the PaN community.

Organisations



Education is becoming an increasingly important topic to help scientists work on photon and neutron sources. Other relevant areas such as advanced quantum technologies will also play a key role in the future.

One of the goals of ExPaNDS (European Open Science Cloud (EOSC) Photon and Neutron Data Service) is to train research scientists in order to better understand the issues, methods and available computational RI infrastructures to address critical research questions. Our PaN-training catalogue provides a one-stop shop for trainers and trainees to discover online information and content:

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- For trainers the catalogue offers an environment for sharing materials and event information.
- For trainees, it offers a convenient gateway via which to identify relevant training events and resources, and to perform specific, guided analysis tasks via training workflows to provide FAIR research.

CERIC SÖLEIL diamond Central European Research Infrastructure Consortium SYNCHROTRON Diamond Light Source Central European Research SOLEIL Diamond Light Source is the UK's Infrastructure Consortium national synchrotron. It works like SOLEIL is located in France and is (CERIC-ERIC) a giant microscope,... both an electromagnetic radiation source covering a wide range.. CERIC-ERIC integrates and 4 training materials provides open access to some of 15 training materials the best facilities in Europe, to 0 upcoming events (1 past MAXIV event) 39 training materials MAX IV Ö HZDA The MAX IV facility, based in ESRF Sweden, will have the highest HELMHOLTZ ZENTRUM quality of X-rays available to ... RESDEN BOSSENDOR ESRF – European Syn-Helmholtz-Zentrum Dres-3 training materials chrotron Radiation Facility den-Rossendorf (HZDR) The ESRF is the world's most The HZDR is a member of the intense X-ray source and a centre Helmholtz Association of German of excellence for fundamental Research Centres. As and... registered,... 5 training materials Stanford Synchrotron Radi-2 training materials ation Lightsource The Stanford Synchrotron Radiation Lightsource (SSRL), a Directorate of the SLAC ALBA National.. Deutsches Elektronen-Syn-ALBA 2 training materials chrotron (DESY) ALBA is a 3rd generation DESY is one of the world's leading Synchrotron Light facility located accelerator centres based in in Spain near Barcelona, being Germany. Researchers use the ... FOR SOCIETY 1 training material 1 training material 0 upcoming events (1 past Institut Laue-Langevin event) (ILL) PAUL SCHERRER INSTITUT The Institut Laue-Langevin is an C international research centre at the leading edge of neutron... Paul Scherrer Institute Elettra Sincrotrone Trieste 1 training material (PSI) Elettra The Paul Scherrer Institute PSI is HZB Elettra Sincrotrone Trieste is a the largest research institute for multidisciplinary international natural and engineering... research center of excellence... Zentrum Berlin Helmholtz-Zentrum Berlin UK Research and Innovation (HZB) 既 HZB in Germany has existed since Science and Technology Facilities Cour 2009. Its roots go much further UK Research and Innovainto the past, given that HZB... tion (UKRI) Science and Technology Fa-UKRI works in partnership with cilities Council (STFC) universities, research science & Technology Pacificies Council ISIS Neutron and Muon Source STFC is part of UKRI, a nonorganisations, businesses, charities, and... departmental public body funded ISIS Neutron and Muon by a grant-in-aid from the UK ... Source ISIS Neutron and Muon Source is

Training Material and Events

Materials in our training catalogue can be accessed at any time. These may be in a variety of different formats, including online tutorials, videos, presentations, and so on.

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Scientific topic			
extended x-ray absorption f	4	$\leftarrow \text{Previous} 1 2 3 4 5$	6 Next \rightarrow
crystallography	2		
macromolecular crystallography	2	Observation of the transition to metal hydrogen Video from the joint ESRF-ILL colloquia. Understanding how and when molecular solid hydrogen may transform into a metal has stimulated many theoretical works since the 30's. It is still an opened theoretical question and an experimen tal challenge. The quest for metal hydrogen has pushed major Keywords: metal hydrogen, high pressure, insulator-metal phase transition	
powder diffraction	2		
small angle x-ray scattering	2		
x-ray absorption	2		
x-ray absorption near edge	2		
x-ray fluorescence	2	Photosynthesis and Energy 2022 No short description available.	

A significant portion of the content is harvested from our e-learning platform developed in the PaNOSC project, but also from third-party sources like LEAPS and LENS.

Training Workflows

An essential feature in our training catalogue are graphical training tools or *Training Workflows*. The main types of workflow are: Educational Resources, Learning Pathways and Experiment Maps. These encapsulate different types of, and/or approaches to, training, at different levels of granularity.





Integrated E-Learning Platform

Our associated e-learning platform hosts free education and training for scientists and students with an integration of Jupyter notebooks.



The e-learning platform was developed in the PaNOSC (Photon and Neutron Open Science Cloud) project and is available at: e-learning.pan-training.eu

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Velcome to the world of neutron scattering Course photo by Ulli Koester courtesy of the ILL	

Basics of neutron scattering

Developer and teachers news forum

Eorum for error reports

Discussion Forum

In this first course module, you will learn about the neutron and consider when neutron scattering is an appropriate technique to pursue.

The module is estimated to take 7-8 hours including reading and exercises

Prerequisites: You will benefit from having experience with quantum mechanics. Also, you will need mathematics on the college level - including complex numbers.

Acknowledgements

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