PAUL SCHERRER INSTITUT

PSI facilities newsletter

https://www.psi.ch/science/facility-newsletter
https://synchrotron-analysis.ch/

SLS: REACTION INSIGHTS HELP MAKE SUSTAINABLE LIQUID FUELS

Methanol, produced from carbon dioxide in the air, can be used to make carbon neutral fuels. But to do this, the mechanism by which methanol is turned into liquid hydrocarbons must be better understood so that the catalytic process can be optimised. Now, using sophisticated analytical techniques, researchers from ETH Zürich and Paul Scherrer Institute have gained unprecedented insight into this complex mechanism.

Read the full story: *https://www.psi.ch/en/science/scientific-highlights/reaction-insights-help-make-sustainable-liquid-fuels*

Alessia Cesarini et al., Nature Catalysis (2022)
DOI: 10.1038/s41929-022-00808-0

QUANTUM COMPUTING HUB: SOLVING THE UNSOLVABLE

PSI and ETH Zurich have co-founded the Quantum Computing Hub, where top researchers work together on concepts for quantum computers. One day these machines should comfortably outperform conventional computers in certain computing tasks.

Read the full story*:*
(a) https://www.psi.ch/en/media/our-research/solving-the-unsolvable
(b) https://issuu.com/paul-scherrer-institute/docs/5232_2-22_e?fr=sNzQ3YzQxNDgzMjA

SWISSFEL: ATHOS JUST GOT EVEN BETTER

An upgrade at the soft X-ray beamline of the free electron laser SwissFEL will open up new experimental capabilities. Using an external laser system to 'seed' the emission of X-ray photons, and thus imprint well-defined optical properties on the beam, the upgrade gives the Athos beamline unprecedented stability. With this, ultra-fast 'attosecond' timescales that probe the movements of electrons in chemical reactions become possible.

Read the full story: https://www.psi.ch/en/science/scientific-highlights/athos-just-got-even-better

Further information:
SwissFEL | SwissFEL | Paul Scherrer Institut (PSI): https://www.psi.ch/en/swissfel
SwissFEL Maloja | SwissFEL Maloja | Paul Scherrer Institut (PSI): https://www.psi.ch/en/swissfel/maloja
Homepage – Nanostructures and Ultrafast X-Ray Science | ETH Zurich: https://nux.ethz.ch/
