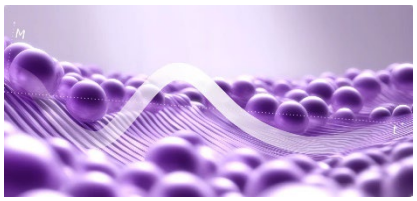
SwissFEL - Short x-ray pulses reveal the source of light-induced ferroelectricity

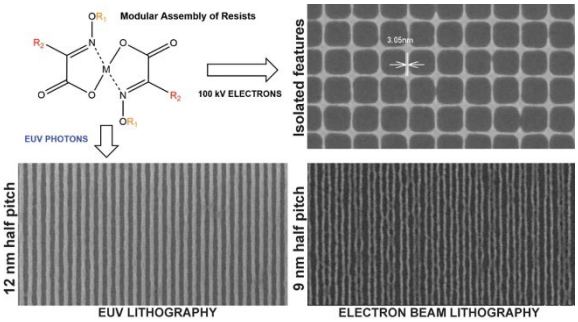


Scientists at the Paul Scherrer Institute PSI have shown that excitation of a spin liquid with intense THz pulses causes spins to appear and align within less than a picosecond. This induced coherent state causes a magnetic field to form inside the material, which is detected using ultrashort X-ray pulses at the X-ray Free Electron Laser SwissFEL.

Read more: *https://www.psi.ch/en/bernina-group/scientific-highlights/controlling-magnetic-waves-in-a-spin-liquid*

R. Mankowsky, et al, Nature Communications, 15, 7183 (2024)

SLS - Novel Photoresist Chemistry Enables Lithography Approaching Angstrom-Scale Resolution

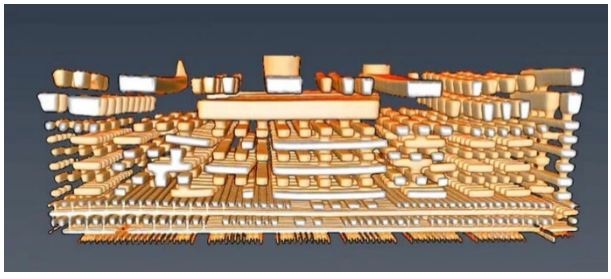


Photoresist materials are crucial in the manufacturing of computer chips, where the circuits are initially printed in the photoresist using photolithography. As the demand for smaller and more precise circuitry in computer chips grows, photoresists must resolve features with smaller sizes and higher density. components: a metal atom and a radical initiator bonded to it.

Read more: https://www.psi.ch/en/lxn/scientific-highlights/novel-photoresist-chemistry-enables-lithography-approaching-angstrom

M. S.M. Saifullah et al, ACS Nano, 2024 (accepted)

SLS - New X-ray world record: Looking inside a microchip with 4 nanometre precision



In a collaboration with EPFL Lausanne, ETH Zurich and the University of Southern California researchers at the Paul Scherrer Institute PSI have used X-rays to look inside a microchip with higher precision than ever before. The image resolution of 4 nanometres marks a new world record. The high-resolution three-dimensional images of the type they produced will enable advances in both information technology and the life sciences.

Read more: *https://www.psi.ch/en/news/media-releases/new-x-ray-world-record-looking-inside-a-microchip-with-4-nanometre-precision*

T. Aidukas et al, Nature 632, 81 (2024)