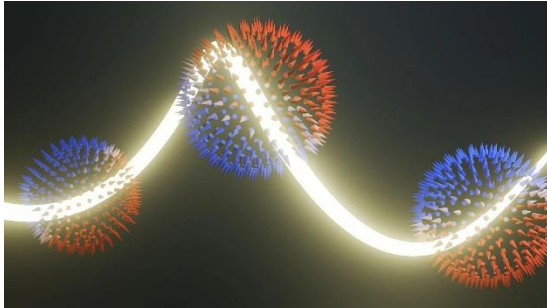


SLS - Orbitronics: new material property advances energy-efficient tech



Orbital angular momentum monopoles have been the subject of great theoretical interest as they offer major practical advantages for the emerging field of orbitronics, a potential energy-efficient alternative to traditional electronics. Now, through a combination of robust theory and experiments at the Swiss Light Source SLS at Paul Scherrer Institute PSI, their existence has been demonstrated. The discovery is published in the journal Nature Physics.

Read more: <https://www.psi.ch/en/news/science-features/orbitronics-new-material-property-advances-energy-efficient-tech>

Y. Yen, et al, Nature Physics. 2024

SwissFEL - Nobel Prize winner Anne L'Huillier visits SwissFEL



On the 9th September, scientists at SwissFEL had the pleasure of welcoming Nobel Prize winner, Anne L'Huillier. Professor L'Huillier won the 2023 Physics Nobel Prize for developing experimental methods that generate attosecond pulses of light. These pulses of light are so short (one attosecond = 0.0000000000000001 seconds!) that they allow us to see how electrons move in matter.

Read more:

<https://www.psi.ch/en/news/science-features/nobel-prize-winner-anne-lhuillier-visits-swissfel>

<https://www.psi.ch/en/news/science-features/swissfel-a-next-generation-tool-for-attosecond-science>

SLS - Magnetism in thin layers: One electron makes the difference



Researchers at the Paul Scherrer Institute PSI can selectively manipulate magnetism at the interfaces between thin layers. This is an important step on the way to novel types of computer memory.

Thorsten Schmitt (left) and Milan Radovic at their experimental station at the Swiss Light Source SLS. Here they examined the complex electronic structure and the local magnetic properties of thin layers of lanthanum nickelate and lanthanum titanate.

Read more: <https://www.psi.ch/en/news/psi-stories/magnetism-in-thin-layers-one-electron-makes-the-difference>