

# SACLA draws acclaim for unique XFEL design

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A detailed technical introduction to the SPring-8 Angstrom Compact free-electron Laser (SACLA) appeared online in *Nature Photonics*.

The attention on the world's second XFEL facility comes in response to its record-breaking size and performance: SACLA boasts the shortest wavelength in the world (0.63 Angstroms), an extremely broad [wavelength range](#) (0.63 - 3 Angstroms) and a very high peak output of 10 GW. SACLA achieves this performance despite having an overall length of only 700 meters, a fraction of the 2 - 4 km taken up by XFEL facilities in the United States and Europe.

The unique design and original Japanese technologies have enabled SACLA's extremely compact size and its remarkable performance. SACLA is certain to set the standard for XFEL design at new facilities under contemplation across the world.

In March, SACLA was made for use by researchers from within and outside of Japan. The SACLA team continues to work to improve the facility's performance, aiming in the medium-term future to realize the formation of a single-mode laser, and in the longer-term future to develop even more compact XFEL.

Provided by RIKEN

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