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Force-neutral adjustable phase undulator array for compact FELs and multiline FEL facilities

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The Force-Neutral Adjustable Phase Undulator (FNAPU) is set to revolutionize future free-electron laser (FEL) undulator designs. This innovative technology is gaining rapid traction as its compact and lightweight design offers a cost-effective solution for X-ray production. The FNAPU can be efficiently scaled to lengths of 5 meters and beyond and meet the requirements for light production with specific polarizations. Their multiplexing capability is especially beneficial for covering a wide photon energy range and enabling multiple X-ray beams, making them ideal for diverse scientific and industrial applications such as FELs for extreme ultraviolet (EUV) lithography in semiconductor fabrication and X-ray FELs that require small-period undulators.

Footnotes

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