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## **FLASH2020+ - a unique XUV and soft x-ray free-electron laser**

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The DESY2030 strategy includes an ambitious development program for FLASH –FLASH2020+. FLASH is based on its superconducting accelerator currently the only high-repetition rate XUV and soft x-ray free-electron laser (FEL) facility worldwide. The goal of FLASH2020+ is to stay at the forefront of FEL technology in order to enable excellent science and ensure optimum conditions for users also in the future. The present FLASH2020+ design foresees to operate a multi FEL facility with two FEL lines. The first FEL line operated in self-amplified spontaneous emission (SASE) mode shall feature novel lasing schemes based on an advanced flexible undulator concept. The second line will be externally seeded while maintaining the high repetition rate of FLASH. Furthermore we plan to extend the wavelength range in the fundamental towards the O-K-edge and to provide variable polarization in fundamental and/or harmonics. Finally FLASH2020+ will extend the capabilities for time-resolved experiments using pump-probe schemes by generating ultra-short, sub-femtosecond pulses and by providing more flexible multi-colour pump schemes.

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