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Study on UV FEL single shot damage threshold of an Au thin film

We evaluate the damage threshold of an Au coated flat mirror, which is one of the reflective optics installed on FEL-1 beamline of Dalian Coherent Light Source (DCLS), upon far UV free electron laser (FEL) irradiation. The surface of the coating is characterized by profilometer and optical microscope. We present also theoretical approach of the phenomenon by applying conventional single-pulse damage threshold calculation as well as one-dimensional thermal diffusion model to the case.

Journal of Synchrotron Radiation Special Issue: will you submit your contribution?

yes

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