

# Optimization of a hard laser plasma based X-ray source according to warm dense matter absorption spectroscopy diagnostic requirements

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In our recent studies [1, 2], we discussed choosing an optimum material and target thickness to increase X-ray source brightness in the wavelength range of 2-6 Å (2-6 keV) considering relatively low-Z elements for X-ray absorption spectroscopy diagnostic of plasma.

[1] Martynenko A S, Pikuz S A, Skobelev I Y, Ryazantsev S N, Baird C D, Booth N, Döhl L N K, Durey P, Faenov A Y, Farley D, Kodama R, Lancaster K, McKenna P, Murphy C D, Spindloe C, Pikuz T A and Woolsey N 2021 *Matter and Radiation at Extremes* **6** 014405

[2] Martynenko A S, Pikuz S A, Skobelev I Y, Ryazantsev S N, Baird C, Booth N, Doehl L, Durey P, Faenov A Y, Farley D, Kodama R, Lancaster K, McKenna P, Murphy C D, Spindloe C, Pikuz T A and Woolsey N 2020 *Physical Review E* **101** 043208