

## DEVELOPMENT OF A SOLID TARGET DELIVERY SYSTEM FOR APPLICATION IN X-RAY EXPERIMENTS

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Synchrotron insertion devices and x-ray free electron lasers deliver pulse trains of x-rays with up-to MHz to sub-GHz repetition rate. These x-rays can ablate samples in a single shot, necessitating material replacement in a short time before the next pulse arrives. Typically, this is done with a dilute solution in a high-speed jet or with a sputtering source, yet many applications make these solutions unworkable. We present the development of a fast, solid-target sample delivery system for high repetition rate x-ray sources, to alleviate these issues. Tests of the system at the LCLS nano-focusing beamline and future applications in various user experiments are outlined.