



1. Title:	Potentiality of Magnetically Confined Plasma as an Efficient Extreme Ultraviolet Source
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3. Abstract body:

Possibility of magnetically confined/controlled plasma is discussed as a method to enhance the plasma conversion efficiency (CE) of extreme ultraviolet (EUV) sources. Time-dependent CEs of Sn and Li plasmas are evaluated using a collisional-radiative atomic model with opacity effects. The analysis indicates that the commonly observed low CEs are largely due to a transient nature of pinching plasma and CE can be significantly increased by prolonging the duration, both for Sn and Li plasma. It also indicates that confinement is crucially important for Li plasma to enhance CE and a confined Li plasma has a potentiality to improve CE, order of magnitude compared with conventional EUV sources. A proof-of-principle experiment for the magnetically-confined source plasma is also demonstrated.

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