

Abstract Submitted
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Propagation dynamics of a room-temperature pulsed argon plasma plume through a simple dispersion-grating diagnostic method¹

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— In this paper, a novel grating-ICCD camera dispersion diagnostic method was designed to investigate the propagation behaviors of an open-air pulsed argon plasma plume. Based on the dispersion feature of gratings, the irradiative plasma plume was dispersed into several emission-volumes corresponding to different wavelengths. And a series of high-speed dispersed emission-image sequences were captured by the ICCD camera. From these sub-microsecond emission-images at different wavelengths, the temporal and spatial propagation behaviors of excited species in the plasma plume was observed clearly.

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