

عنوان مقاله:

Analysis of water plasma temperature using shadowgraphy method

محل انتشار:

هفتمین کنفرانس بین المللی فیزیک، ریاضی و توسعه علوم پایه (سال: 1402)

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خلاصه مقاله:

Shadowing is one of the common methods in measuring, expanding and moving particles in the laboratory environment. In this article, the plasma wave front is measured using the shadowing method, which is considered an optical method. due to the dynamic behavior of plasma. We measure the average temperature of particles using the hydrodynamic equations of particles. In this research, two solid-state Nd:YAG lasers were used, the first one with a wavelength of 1064 nm, a pulse width of 18 nanoseconds, and an energy of 140 mJ was used for interaction and ablation. The second laser is the second harmonic of the Nd:YAG laser, which is called a probe laser. This laser with a wavelength of 532 nm is used to illuminate the environment. We measure laser plasma temperature in drinking water environment by shadowing method

کلمات کلیدی:

Laser plasma, shadowgraphy, plasma temperature and density

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