Proc. of 6th Conf. of Waves & Lasers. 1991. 2. 20

초청강연 Ⅳ

LASER-PRODUCED PLASMA AS AN X-RAY SOURCE

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The interaction of high-intensity, focused, nanosecond laser light with matter results in the production of high-temperature plasma, which in turn emits an intense pulse of x rays. The x-ray spectrum consists of strong line components of several keV photon energy and broad continuum. Such an x-ray source provides many advantages over conventional ones for many applications. Pulse nature of the x-ray emission is well-suited for studying transient phenomena and for imaging living biological specimen. Recent experiments have also shown that the laser plasma x ray may be used for x ray lithography. These studies and other applications will be discussed in detail.