THE LASER PRIMING OF HIGH ENERGY MATERIALS IGNITION

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By using relatively high laser power densities, it is possible to quickly heat this small portion of the explosive to the critical temperature. The application of lasers to initiate explosives is advantageous because it allows the researcher to closely control and measure how much energy is delivered to the explosive and the rate at which that energy is delivered. The researcher has some degree of control over how much of the explosive material is heated by the laser. This is accomplished primarily by varying the spot size produced by the laser, as control over the penetration depth of the laser light into the explosive is much more limited and difficult to measure.

Optical fiber, semiconductor laser, detonation priming

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