

EFFECT OF 10.6 μm PULSED LASER ON THE CR-39

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ABSTRACT

The effect on alpha and fission fragment tracks recorded in CR-39 nuclear track detectors irradiated with 10.6 μm CO₂ pulsed laser has been studied in the energy range of 60 mJ/P to 2 J/P for different exposure times. It has been found that surface structure did not change when exposed to energies below 180 mJ/P and for total energies of up to 3600 J. The surface has shown significant changes in terms of track sizes, shapes and cluster-like structures when exposed for energies greater than 450 mJ/p independent of the exposure time.