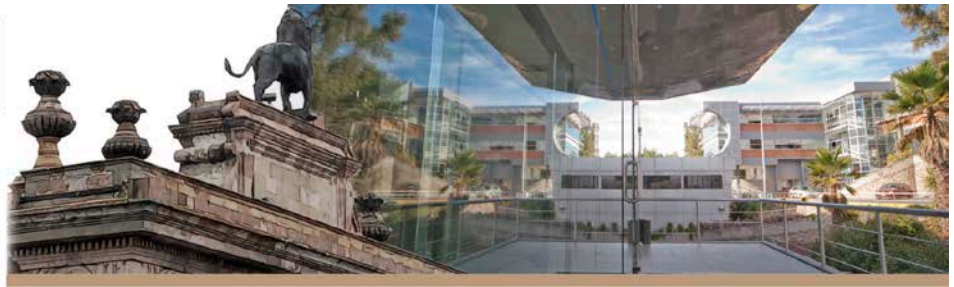


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Femtosecond laser micromachining

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ABSTRACT

When femtosecond laser pulses are focused tightly into a transparent material, the intensity in the focal volume can become high enough to cause nonlinear absorption of laser energy. The absorption, in turn, can lead to permanent structural or chemical changes. Such changes can be used for micromachining bulk transparent materials. Applications include data storage and the writing of waveguides and waveguide splitters in bulk glass, fabrication of micromechanical devices in polymers, and subcellular photodisruption inside single cells.



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