Glass Micromachining

Research Topics 1999

IRIS
CREATIVITY INNOVATION ENTREPRENEURSHIP
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New Machining Strategies for Glass

Objectives

To investigate methods for machining glass using excimer lasers.

Expected Outcomes

Normally 248nm KrF excimer laser radiation does not machine glass, 193nm ArF must be used where the absorption of the radiation is stronger. Unfortunately 193nm machining is slow and therefore expensive. New techniques are being investigated for machining glass at 248nm using surface pre-treatments which may open the way for faster, more economical microfabrication in glass suitable for microfluidics and biotechnological applications.

Researcher

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Research Coordinators:

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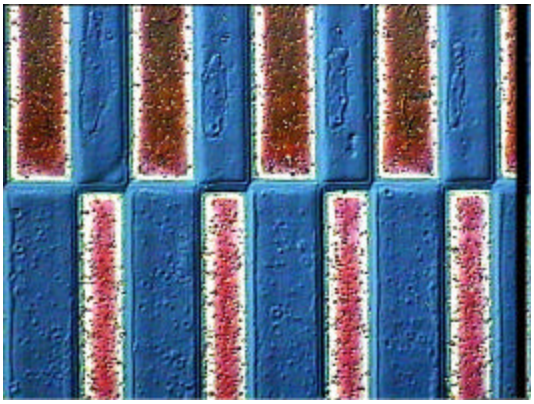

A 20-micrometer wide channels laser engraved into glass with minimal cracking. The structure is part of a diffractive micro optical device.