

MICROSTRUCTURING LITHIUM NIOBATE

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ABSTRACT

Lithium niobate is among the most important nonlinear optical materials used today in the photonics industry as it combines a variety of very important optical and electromechanical properties. Microstructuring of this material open new possibilities for the utility of lithium niobate into a wider range of applications beyond the area of optoelectronics.

In this talk a synopsis of methods, developed at the ORC, for the fabrication of refractive, diffractive, nonlinear and actual microstructures on congruent lithium niobate single crystals will be given. The development of such methods shows the potential for using this nonlinear ferroelectric crystal as the base for the development of integrated miniature multifunctional devices.