

## Characterization of individual elliptical waveguides

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### Resumen

We experimentally characterize the behaviour of individual elliptical waveguides that we fabricate using the femtosecond-laser writing technique [1] in a borosilicate glass with 2 cm of propagation distance. We vary the writing power and writing velocity of the waveguides and thus have a wide framework of the available modes we can obtain. The supercontinuum laser enables us to sweep the wavelenghts across the range from 600 nm to 850 nm, increasing 25 nm in each step. We are currently working in the laboratory with photonic lattices with a large amount of waveguides, therefore this characterization will let us optimize the parameters of fabrication to model lattice within the tight-binding model and beyond this approximation.

### Referencias

[1] Alexander Szameit and Stefan Nolte. Discrete optics in femtosecond-laser-written photonic structures. *Journal of Physics B: Atomic, Molecular and Optical Physics*, 43(16):163001, July 2010.