

Polymer Micro-Bottle Resonators Coupled *Via* Optical Fiber Taper Tips

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This work studies the excitation of whispering gallery modes (WGM) in polymer micro-bottle resonators (MBR) using the evanescent field of an optical fiber taper as a coupling method.

The MBRs are fabricated using the polymer deposition technique on an optical fiber taper tip. The polymer used is NOA 61, and the maximum diameter is 38 micrometers.

The tapers are fabricated by plasma technique, achieving waist diameters of around 8 micrometers. The WGM excitation in the resonators is validated by using the Fourier transform.