

## Effects of taper parameters on free spectral range of non-adiabatic tapered optical fibers for sensing applications

### ABSTRACT

We investigated the effects of taper parameters on the free spectral range of transmission spectrum of non-adiabatic tapers. From experimental results, the optimum profile for the tapered fiber in terms of taper angle, waist diameter, and length are 11.500 mrad, 10  $\mu$ m, and 20 mm, respectively.

**Keyword:** Free spectral range; Mode coupling; Tapered fiber