

Optical fiber sensor for measuring liquid parameters

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Abstrak

ABSTRACT

An optical fiber sensor for measurement of liquid parameters, such as refractive index and concentration has been developed. The measurement method is based on the attenuation of cladding mode power.
A normal core-clad fiber with a leaky ray zone is used as a sensor. A portion of the clad power is measured by means of a tapered fiber whose diameter d is so chosen that it is always less than or equal to the thickness of the clad. The maximum clad power is detected when the diameter of the probe is nearly equal to the clad thickness