Abstracts

Microbend Fiber-Optic Sensor as Extended Hydrophone

N. Lagakos, W.J. Trott, T.R. Hickman, J.H. Cole and J.A. Bucaro. "Microbend Fiber-Optic Sensor as Extended Hydrophone." 1982 Transactions on Microwave Theory and Techniques 30.10 (Oct. 1982 [T-MTT] (Special Issue on Optical Guided Wave Technology)): 1621-1626.

A novel microbend fiber-optic acoustic sensor has been studied, both analytically and experimentally. The sensor is simple mechanically, insensitive to acceleration, and achieves shape flexibility by utilizing fairly long fiber lengths for the sensing element. The acoustic sensitivity and minimum detectable pressure of the sensor were found to be significantly improved over previously reported microbend sensors. Further optimization of the sensor appears possible.

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