

# **Abstract**

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## **Noise Figure and Gain Coefficient of Doped Fiber Amplifiers for Different Host Materials**

This paper provides a numerical investigation of the noise performance of erbium doped fiber amplifiers (EDFAs) and praseodymium doped fiber amplifiers (PDFAs) in different types of host materials. The noise figure and gain coefficient are calculated for different values of pump and signal wavelengths and optimum operational conditions are established for using these amplifiers in optical communication systems.