Experimental Conclusions of Erbium-Doped Fiber Amplifiers

Both radiations and temperature are known to impact the rare earth doped fiber amplifier (REDFA) properties and then it is very important to ...

The gain characteristics of erbium-doped fiber amplifiers (EDFAs) with erbium concentrations as high as 8900 ppm have been investigated in detail with 0.98 µm and 1.48 µm pumping schemes.

We review the current state of the art of extended L-band EDFAs in single-stage amplification, emphasizing silica-based glass hosts with tailored material compositions of the fiber ...

In this work, the gain degradation of a radiation tolerant EDFA (exploiting a cerium-co-doped active optical fiber) induced by ionizing radiation up to 3 kGy (SiO2), at two dose rates, 0.28 Gy/s and ...

Conclusion The erbium-doped fiber amplifier remains the cornerstone of optical communications, more than three decades after its invention. By directly amplifying signals in the low ...

In order to assess the accuracy of the model, calculations are compared to results of a comprehensive experimental investigation of a particular Er- Al-doped fiber.

Using the general, radially dependent rate-equation EDFA model, it is shown that highest-efficiency operation of saturated EDFAs is achieved with erbium distributed throughout the entire fiber core, in ...

In this paper, we propose the most complete and universal model of the operation of a few-mode YEDFA, which includes clustered Er ions and isolated Yb ions.

Abstract: The efficiency of Er/sup 3+/-doped fiber power amplifiers (EDFAs) pumped at 980 nm was experimentally investigated and quantum conversion efficiencies (QCE) up to 0.89 were achieved.

Both radiations and temperature are known to impact the rare earth doped fiber amplifier (REDFA) properties and then it is very important to investigate how these two parameters will act ...

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