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Title:Simulative analysis of integrated DWDM and MIMO-OFDM system with OADM
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Abstract:In this paper, we first present the concept of adding and dropping the signals by using optical add drop multiplexers (OADMs) in an optical orthogonal frequency division multiplexing (OOFDM) system. We then demonstrated the transmission performance through simulation for Integrated Dense Wavelength Division Multiplexing and Optical-OFDM system with OADM including the fiber nonlinearity effect. The results show that system Q is about 18 dB for this system when operating at 9.953 Gb/s in standard-single-mode-fiber without dispersion compensation up to 4500 km distance. Signal evolution is also remarkable if system is operated at a frequency of 191.151 THz and Relative Intensity to Noise ratio (RIN) adjusted to -155 dB/Hz. 
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Controlled terms:Bit error rate - Dense wavelength division multiplexing - MIMO systems - Signal to noise ratio - Telecommunication systems
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