Generation of Pure Single-Photon States in Commercial Photonic-Crystal Fibers on Telecommunication Frequencies

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Theoretically studied the possibility of generating single-photon states in fibers with active profile dispersion formed by spontaneous four-wave mixing (SFWM) using femtosecond laser pulses. Analyzed the possibility of eliminating the spectral correlation for single-photon states generated in the commercial fibers. To model the structure of photonic crystal fibers and modes SFWM generation and optimization performed on the parameters of the pump and the fiber structure.