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(57) Abstract :

An embodiment of an apparatus includes an optical fiber for which a complete orthogonal basis of propagating modes at an optical telecommunication frequency includes ones of the propagating modes with different angular momenta. The optical fiber has a tubular optical core and an outer optical cladding in contact with and surrounding the tubular optical core. The tubular optical core has a larger refractive index than the optical cladding. The tubular optical core is configured such that those of the propagating modes whose angular momenta have the lowest magnitude for the propagating modes have substantially the same radial intensity profile.

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