

IR optical fibers of nano- and microcrystalline structures for resettable interferometry

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Abstract

We developed and produced by extrusion IR optical fibers based on the new solid solutions of silver halides and monovalent thallium. Optical fibers are produced in the range from 2.0 to 40.0-45.0 microns depending on the composition and work in one-mode regime at the wavelength 10.6 microns. Their optical properties and fundamental characteristics were measured and calculated. We considered the possibility of using IR-optical fibers as mode filters in interferometry reset to zero when searching for Earth-like planets.