

Title (en)
TANTALA DOPED OPTICAL WAVEGUIDE AND METHOD OF MANUFACTURE

Title (de)
OPTISCHER WELLENLEITER, DOTIERT MIT TANTALUMOXID UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)
GUIDE D'ONDE DOPE AU TANTALE ET SON PROCEDE DE FABRICATION

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Application
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Abstract (en)
[origin: WO0039039A2] The present invention is directed to low loss optical waveguides doped with tantala and methods for manufacturing such waveguides. SiO₂ soot is doped with Ta₂O₅ to form a soot blank which is consolidated under conditions suitable to prevent the crystallization within the Ta₂O₅-SiO₂ containing waveguides. The resulting cane is then either drawn into an optical fiber or overclad and subsequently drawn into an optical fiber. High temperature consolidation in either a gaseous atmosphere or vacuum atmosphere is used to sinter and vitrify the soot blank prior to drawing to produce a low loss optical waveguide fiber.
[origin: WO0039039A2] The present invention is directed to low loss optical waveguides doped with tantala and methods of manufacturing such waveguides. SiO₂ soot is doped with Ta₂O₅ to form a soot blank which is consolidated under conditions suitable to prevent the crystallization within the Ta₂O₅-SiO₂ containing waveguides. The resulting rod is then either drawn into an optical fiber or overclad and subsequently drawn into an optical fiber. High temperature consolidation in either a gaseous atmosphere or vacuum atmosphere is used to sinter and vitrify the soot blank prior to drawing to produce a low loss optical waveguide fiber.

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