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(54) **Title:** A PHOTONIC CRYSTAL FIBER, A METHOD OF PRODUCTION THEREOF AND A SUPERCONTINUUM LIGHT SOURCE

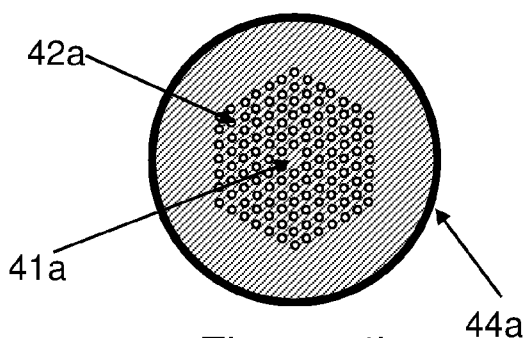


Figure 4b

(57) **Abstract:** The invention concerns a Photonic Crystal Fiber (PCF) a method of its production and a supercontinuum light source comprising such PCF. The PCF has a longitudinal axis and comprises a core extending along the length of said longitudinal axis and a cladding region surrounding the core. At least the cladding region comprises a plurality of microstructures in the form of inclusions extending along the longitudinal axis of the PCF in at least a microstructured length section. In at least a degradation resistant length section of the microstructured length section the PCF comprises hydrogen and/or deuterium. In at least the degradation resistant length section the PCF further comprises a main coating surrounding the cladding region, which main coating is hermetic for the hydrogen and/or deuterium at a temperature below T_h , wherein T_h is at least about 50 °C, preferably 50 °C < T_h < 250 °C.

