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(US). SMITH, Jacob M; c/o Leica Microsystems Inc., 10 Parkway North, Suite 300, Deerfield, Illinois 60015 (US).

(74) Agent: J A KEMP LLP; 80 Turnmill Street, London, EC1M 5QU (GB).

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(71) Applicant: LEICA MICROSYSTEMS INC. [US/US];
10 Parkway North, Suite 300, Deerfield, Illinois 60015 (US).

(71) Applicant (for AL only): LEICA MICROSYSTEMS
CMS GMBH [DE/DE]; Ernst-Leitz-Strasse 17-37, 35578
Wetzlar (DE).

(72) Inventors: HART, Robert H; c/o Leica Microsystems Inc.,
10 Parkway North, Suite 300, Deerfield, Illinois 60015

(54) Title: HYBRID FIBRE-BASED INTERFEROMETER DESIGN WITH DISPERSION FOR COMPLEX CONJUGATE RESOLUTION AND RELATED ASPECTS

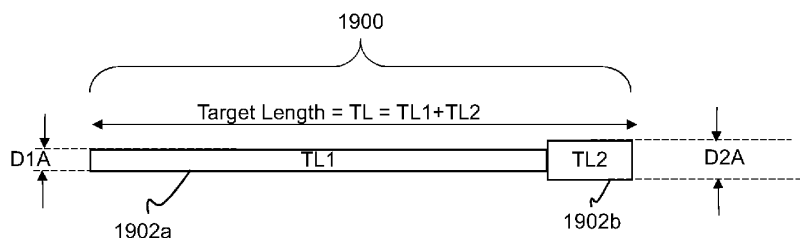


FIG. 19A

(57) Abstract: A highly dispersive single-mode hybrid optical fibre (1900) located in one of a reference arm or a probe arm of an optical interferometer, the hybrid fibre (1900) comprising at least two optical fibres (1902, 1902), at least one of the at least two optical fibres having a different core diameter and different dispersive characteristics to at least one other optical fibre of the at least two optical fibres, wherein the at least two optical fibres are end-to-end fused to form a hybrid optical fibre, and wherein each one of the at least two optical fibres has a length based on the core diameter of that optical fibre relative to a central wavelength of a light beam passing through the hybrid optical fibre and a target GDD per unit length based on the target length of the hybrid optical fibre, wherein the hybrid optical fibre adds an additional GDD value compared to an optical fibre in the other one of the reference arm or probe arm of the optical interferometer.

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