Title (en)

FRESNEL PIGGYBACK INTRAOCULAR LENS THAT IMPROVES OVERALL VISION WHERE THERE IS A LOCAL LOSS OF RETINAL FUNCTION

Title (de)

INTRAOKULARE FRESNEL-HUCKEPACK-LINSE ZUR VERBESSERUNG DES ALLGEMEINEN SEHVERMÖGENS BEI LOKALEM VERLUST DER RETINAFUNKTION

Title (fr)

LENTILLES INTRAOCULAIRES SUPERPOSÉES DE FRESNEL QUI AMÉLIORENT LA VISION GLOBALE OÙ UNE PERTE LOCALE DE LA FONCTION RÉTINIENNE EST RENCONTRÉEE

Publication

EP 3267943 A1 20180117 (EN)

Application

EP 15800947 A 20150909

Priority

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- IB 2015002000 W 20150909

Abstract (en)

[origin: WO2016142736A1] Systems and methods are provided for improving overall vision in patients suffering from a loss of vision in a portion of the retina (e.g., loss of central vision) by providing a piggyback lens which in combination with the cornea and an existing lens in the patient's eye redirects and/or focuses light incident on the eye at oblique angles onto a peripheral retinal location. The piggyback lens can include a redirection element (e.g., a prism, a diffractive element, or an optical component with a. decentered GRIN profile) configured to direct incident light along a deflected optical axis and to focus an image at a location on the peripheral retina. Optical properties of the piggyback lens can be configured to improve or reduce optical errors at the location on the peripheral retina. One or more surfaces of the piggyback lens can be a tone surface, a higher order aspheric surface, an aspheric Zeraike surface or a Biconic Zernike surface to reduce optical errors in an image produced at a peripheral retinal location by light incident at oblique angles. One or more surfaces of the piggyback lens can be faceted.

IPC 8 full level

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CPC (source: EP)

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Citation (search report)

See references of WO 2016142736A1

Designated contracting state (EPC)

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