

Title (en)

APPARATUS AND METHOD FOR PROJECTING LIGHT THROUGH A LIGHT DISPERSIVE MEDIUM

Title (de)

VORRICHTUNG UND VERFAHREN ZUM PROJIZIEREN VON LICHT DURCH EIN LICHTZERSTREUENDES MEDIUM

Title (fr)

APPAREIL ET PROCÉDÉ DE PROJECTION DE LUMIÈRE DANS UN MILIEU DISPERSIF DE LUMIÈRE

Publication

**EP 3375254 A1 20180919 (EN)**

Application

**EP 16797624 A 20161111**

Priority

- GB 201520076 A 20151113
- GB 2016053549 W 20161111

Abstract (en)

[origin: GB2544337A] The apparatus comprises a light modifier (14) for modifying the characteristics of incident light (26) before it reaches the medium (28), a controller for the light modifier (14), and a detector (24) for detecting an intensity of light backscattered (40) by the medium. The backscattered light arises from an interaction between the incident light and the medium, and may comprise light having a frequency which is equal to, or a harmonic of, a frequency of the incident light. The detector provides a feedback signal for the light modifier that is dependent on the intensity of backscattered light detected, and the controller is configured to determine the modification of at least one characteristic of the incident light that is applied by the light modifier using an optimisation algorithm having the feed back signal as a parameter. The light modifier may alter the instantaneous phase of the incident light or apply a phase shift to the incident light. The invention allows an image to be focused through a light dispersive medium by compensating for scattering or diffuse reflection.

IPC 8 full level

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