(54) Title: BEAM SHAPER, OPTICAL SYSTEM AND METHODS USING THE SAME

FIG. 3

(57) Abstract: An optical beam shaper comprises a polarization-dependent phase adjustment member which applies a phase pattern of equal magnitude and opposite sign to two orthogonal polarization states. In a preferred embodiment the beam shaper is a diffractive element made of a birefringent material, such as a photo-polymerizable liquid crystal polymer frozen in a uniaxial alignment, said diffractive element comprising a plurality of zones, each zone having a stepped thickness defining a plurality of steps. The beam shaper can be used to introduce astigmatism to a polarized light beam or to undo the astigmatism to a beam with an orthogonal polarization state. The beam shaper is advantageously used within a detection device, such as a fluorescence scanner.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. G01N21/64 G02B5/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
G02B G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO—Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Date of the actual completion of the international search 28 April 2009

Date of mailing of the international search report 08/05/2009

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