



(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Bibliography INID code(s) 73

(51) Int Cl.:
G02B 26/06 ^(2006.01) **G02B 27/28** ^(2006.01)
G02B 21/32 ^(2006.01)

(48) Corrigendum issued on:
01.06.2016 Bulletin 2016/22

(45) Date of publication and mention
of the grant of the patent:
02.03.2016 Bulletin 2016/09

(21) Application number: **12178391.4**

(22) Date of filing: **27.07.2012**

(54) **Plasmonic plate for generating optical vortices**

Plasmonplatte zur Erzeugung optischer Wirbel

Plaque plasmonique pour générer des tourbillons optiques

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **27.07.2011 IT TO20110682**

(43) Date of publication of application:
30.01.2013 Bulletin 2013/05

(73) Proprietor: **FINMECCANICA - Società per azioni
Roma (IT)**

(72) Inventors:
• **Bovino, Fabio Antonio**
00195 ROMA (IT)
• **Braccini, Matteo**
00195 ROMA (IT)
• **Benedetti, Alessio**
00195 ROMA (IT)

(74) Representative: **Bergadano, Mirko et al**
Studio Torta S.p.A.
Via Viotti, 9
10121 Torino (IT)

(56) References cited:
US-A1- 2006 054 793

- **CHRISTIAN H. J. SCHMITZ ET AL: "Tuning the orbital angular momentum in optical vortex beams", OPTICS EXPRESS, vol. 14, no. 15, 1 January 2006 (2006-01-01), page 6604, XP055018752, ISSN: 1094-4087, DOI: 10.1364/OE.14.006604**
- **AVI NIV ET AL: "Propagation-invariant vectorial Bessel beams obtained by use of quantized Pancharatnam Berry phase optical elements", OPTICS LETTERS, vol. 29, no. 3, 1 January 2004 (2004-01-01), page 238, XP055018755, ISSN: 0146-9592, DOI: 10.1364/OL.29.000238**
- **GABRIEL BIENER ET AL: "Formation of helical beams by use of Pancharatnam-Berry phase optical elements", OPTICS LETTERS, vol. 27, no. 21, 1 November 2002 (2002-11-01), page 1875, XP055018756, ISSN: 0146-9592, DOI: 10.1364/OL.27.001875**
- **JÖRG B. GÖTTE ET AL: "Light beams with fractional orbital angular momentum and their vortex structure", OPTICS EXPRESS, vol. 16, no. 2, 1 January 2008 (2008-01-01), page 993, XP055018758, ISSN: 1094-4087, DOI: 10.1364/OE.16.000993**

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

- **AMIRI ET AL: "Fresnel diffraction from 1D and 2D phase steps in reflection and transmission modes", OPTICS COMMUNICATIONS, NORTH-HOLLAND PUBLISHING CO. AMSTERDAM, NL, vol. 272, no. 2, 24 February 2007 (2007-02-24), pages 349-361, XP005905030, ISSN: 0030-4018, DOI: 10.1016/J.OPTCOM.2006.11.048**