



- (51) International Patent Classification:
H01S 3/10 (2006.01) G02F 1/29 (2006.01)
- (72) Inventor: YIN, Shizhuo; 1366 Ridgemaster Drive, State College, Pennsylvania 16803 (US).
- (21) International Application Number:
PCT/US2017/047724
- (74) Agent: FISCHER, Ralph G.; BUCHANAN INGERSOLL & ROONEY PC, One Oxford Centre, 301 Grant Street, 20th Floor, Pittsburgh, Pennsylvania 15219 (US).
- (22) International Filing Date:
21 August 2017 (21.08.2017)
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
62/431,567 08 December 2016 (08.12.2016) US
- (71) Applicant: THE PENN STATE RESEARCH FOUNDATION [US/US]; 304 Old Main, University Park, Pennsylvania 16802-1504 (US).

(54) Title: LASER BEAM COMBINING APPARATUS AND METHOD

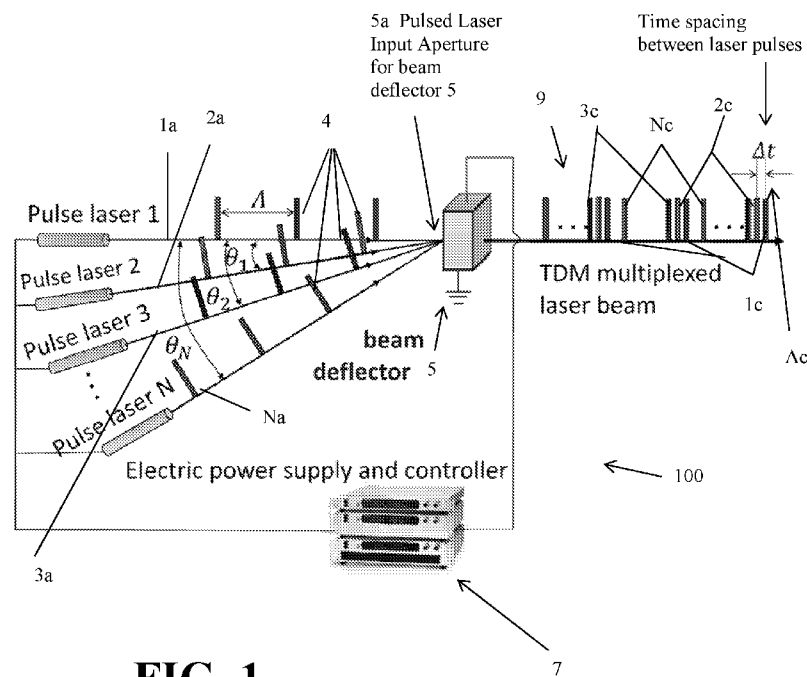


FIG. 1

(57) Abstract: A laser beam apparatus can include a set of pulsed lasers (e.g. solid state fiber lasers), a controllable beam deflector, and an electric power supply and controller connected to the beam deflector. The laser pulses from the different pulsed lasers can be configured to hit the beam deflector at different angles and different times. The electric power supply and controller can be configured to control and synchronize the timing and angle at which the different lasers pulses hit the beam deflector with an adjustment of the deflection property of the beam deflector so that the laser pulses from different input directions propagate in the same direction after passing through the beam deflector. The laser pulses from the lasers can be combined together via this control and synchronization.



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

Published:

— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

26 July 2018 (26.07.2018)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 2017/047724

A. CLASSIFICATION OF SUBJECT MATTER		
<i>H01S 3/10 (2006.01)</i> <i>G02F 1/29 (2006.01)</i>		
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)		
G02F 1/00-1/39, H01S 3/00-3/30		
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 practicable, search terms used)		
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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	WO 2012/136434 A2 (ASML NETHERLANDS B.V.) 11.10.2012, paragraphs [0074], [0076], [0090], [00127], [00145], [00181], [00232]	1, 2, 8, 22 3-7, 9-10, 12-19, 23-25
X Y	US 5808772 A (KABUSHIKI KAISHA TOSHIBA) 15.09.1998, column 5, line 58 – column 6, line 3, column 13, lines 48-53	11, 20, 21 12-19
Y	CHEN, Hongwei. Optical beam scanning using potassium tantalate niobate, (2015). Graduate Theses and Dissertations, p. 1, paragraph 1, p. 12, chapter 1.2.3, p. 16, chapter 2.2, paragraph 2, p. 24, lines 9-10	3, 4, 23-25
Y	US 2013/0147891 A1 (CANON KABUSHIKI KAISHA) 13.06.2013, paragraphs [0039]-[0041]	5-7, 14-16
Y	WO 2004/044882 A1 (DUKE UNIVERSITY) 27.05.2004, p. 2, lines 13-24	9, 10, 17-19
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“P” document published prior to the international filing date but later than the priority date claimed		
Date of the actual completion of the international search	Date of mailing of the international search report	
15 June 2018 (15.06.2018)	21 June 2018 (21.06.2018)	
Name and mailing address of the ISA/RU: Federal Institute of Industrial Property, Berezhkovskaya nab., 30-1, Moscow, G-59, GSP-3, Russia, 125993 Facsimile No: (8-495) 531-63-18, (8-499) 243-33-37	Authorized officer E. Minaeva Telephone No. (495) 531-64-81	