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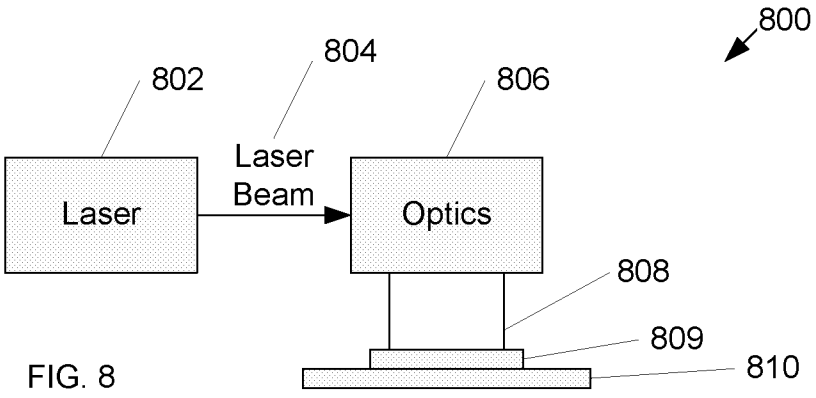


FIG. 8

(57) Abstract: A thin beam directional crystallization system configured to process a substrate comprises a laser configured to produce laser light, the laser configured to have a high energy mode and a low energy mode. The high energy mode is configured to produce light energy sufficient to completely melt a substrate coated with amorphous silicon film, while the low energy mode is configured to produce light energy that is not sufficient to completely melt a substrate coated with amorphous silicon film. The system further comprises beam shaping optics coupled to the laser and configured to convert the laser light emitted from the laser into a long thin beam with a short axis and a long axis, a stage configured to support the substrate and film, and a translator coupled with the stage, the translator configured to advance the substrate and film so as to produce a step size in conjunction with the firing of the laser.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - B23K 26/00 (2008.04)
USPC - 219/121.65
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)
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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)
USPTO EAST System (US, USPG-PUB, EPO, DERWENT), MicroPatent,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2005/0259709 A1 (DAS et al) 24 November 2005 (24.11.2005) entire document	1,4,7,10-14,17,20,23-25 --- 2-3,5-6,8-9,15-16,18-19,21-22
Y	US 2003/0022471 A1 (TAKETOMI et al) 30 January 2003 (30.01.2003) entire document	2-3,6,8-9,15-16,19,21-22
Y	WO 2006/107926 A2 (IM et al) 12 October 2006 (12.10.2006) entire document	5,18
A	US 2004/0171237 A1 (TANAKA et al) 02 September 2004 (02.09.2004) entire document	1-25
A	US 6,596,613 B1 (KUSUMOTO et al) 22 July 2003 (22.07.2003) entire document	1-25
A	US 2005/0035103 A1 (PARTLO et al) 17 February 2005 (17.02.2005) entire document	1-25
A	GB 2 177 256 A (YASUO KANOH et al) 14 January 1987 (14.01.1987) entire document	1-25

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Date of the actual completion of the international search	Date of mailing of the international search report
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