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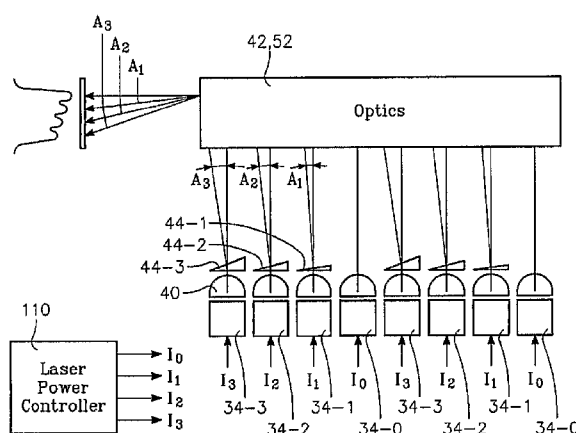
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

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[Continued on next page]

(54) Title: FAST AXIS BEAM PROFILE SHAPING



(57) Abstract: A dynamic surface anneal apparatus for annealing a semiconductor workpiece has a workpiece support for supporting a workpiece, an optical source and scanning apparatus for scanning the optical source and the workpiece support relative to one another along a fast axis. The optical source includes an array of laser emitters (34-n) arranged generally in successive rows of the emitters, the rows being transverse to the fast axis. Plural collimating lenslets (40) overlie respective ones of the rows of emitters and have a collimation direction along the fast axis. The optical source further includes a fast axis optical deflection element (44-n) associated with selected ones of the rows of emitters and having one or a succession of optical deflection angles corresponding to beam deflections along the fast axis for respective rows of emitters. Optics focus light from the array of laser emitters onto a surface of the workpiece to form a succession of line beams transverse to the fast axis spaced along the fast axis in accordance with the succession of deflection angles.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC: H01S 3/10(2006.01),3/101(2006.01)

USPC: 219/121.66,121.76

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)

U.S. : 219/121.66,121.76

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)

APS, fast, axis, optic, reflect, deflect, anneal, crystal, laser, emitter, lenslet, silicon, semiconductor, wafer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P	US 2006/0262408 A1 (KATO) 23 November 2006 (23.11.06), front page.	
A	US 6,771,686 B1 (ULLMAN et al) 03 August 2004 (03.08.04), Front Page and Claim 1.	
A	US 6,556,352 B2 (WANG et al) 29 April 2003 (29.04.03), Front Page.	
A	US 6,044,096 (WOLAK et al) 28 March 2000 (28.03.00), Front Page.	
A	US 4,710,911 (YAMADA et al) 01 December 1987 (01.12.87), Abstract.	



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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