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(71) Applicant: **APPLIED MATERIALS INC.** [US/US];
3050 Bowers Avenue, MS/2061, Santa Clara, CA 95054
(US).

(72) Inventors: **LEON, Francisco, A.**; 777 Addison Avenue,
Palo Alto, CA 94301 (US). **WEST, Lawrence, C.**; 774
Blairwood Court, San Jose, CA 95120-2203 (US). **WO-**
JCIK, Gregory, L.; 7145 Hihn Road, Ben Lomond, CA
95005 (US). **WADA, YUICHI**; C307 4-3-1 Hyoshidai,
Tomisato-shi, Chiba 286-0201 (JP).

(74) Agents: **PRAHL, Eric, L.** et al.; Hale and Dorr LLP, 60
States Street, Boston, MA 02109 (US).

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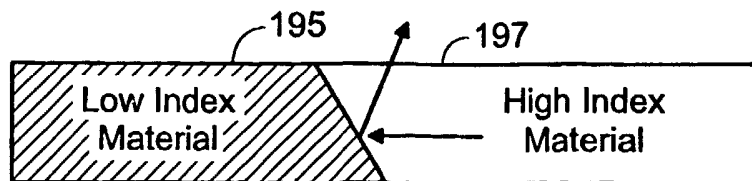
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(54) Title: MASKLESS FABRICATION OF WAVEGUIDE MIRRORS



(57) Abstract: A method of fabricating a waveguide mirror that involves etching a trench in a silicon substrate; depositing a film (e.g. silicon dioxide) over the surface of the silicon substrate and into the trench; ion etching the film to remove at least some of the deposited silicon dioxide and to leave a facet of film in inside corners of the trench; depositing a layer

of SiGe over the substrate to fill up the trench; and planarizing the deposited SiGe to remove the SiGe from above the level of the trench.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER																						
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WEST, INSPEC, IEEE																						
C. DOCUMENTS CONSIDERED TO BE RELEVANT																						
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																				
Y	US 2003/0015770 A1 (TALIN et al) 23 January 2003 (23.01.2003) see abstract.	7																				
Y	US 5,991,487 A (SUGIYAMA et al) 23 NOVEMBER 1999 (23.11.1999), Fig.6- 7D and related description.	1-6,8-11																				
Y	US 6,307,242 B1 (SUGIYAMA et al) 23 OCTOBER 2001 (23.10.2001), col.6, lines 10-1, FIG 5A, Fig.5 B)	1-6,8-11																				
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.																						
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