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- (71) **Applicant: APPLIED MATERIALS, INC.** [US/US];
3050 Bowers Avenue, Santa Clara, California 95054 (US).
- (72) **Inventors: WANG, Wenhui;** c/o Applied Materials, Inc.,
Law Dept., M/S 1269, 3050 Bowers Avenue, Santa Clara,
California 95054 (US). **JIANG, Lei;** c/o Applied Materi-
als, Inc., Law Dept., M/S 1269, 3050 Bowers Avenue, San-
ta Clara, California 95054 (US). **XU, Yongan;** c/o Applied
Materials, Inc. Law Dept., M/s 1269, 3050 Bowers Avenue,
Santa Clara, California 95054 (US). **WANG, Zefang;** c/o
Applied Materials, Inc. Law Dept., M/s 1269, 3050 Bowers
Avenue, Santa Clara, California 95054 (US).

- (74) **Agent: PATTERSON, B. Todd et al.;** 24 Greenway Plaza,
Suite 1600, Houston, Texas 77046 (US).

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- (54) **Title: METHOD FOR FABRICATING OPTICAL DEVICE STRUCTURES**

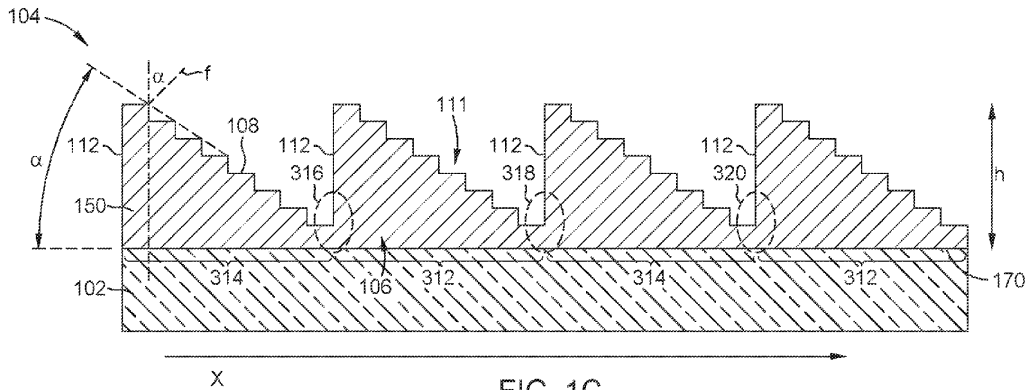


FIG. 1C

- (57) **Abstract:** Methods and apparatus for forming waveguides. One example waveguide generally includes a substrate, a first device layer disposed over a first surface of the substrate, a second device layer disposed over a second surface of the substrate, a first grating disposed over the first device layer, the first grating comprising a plurality of first blazed device structures arranged in a first direction, and a second grating disposed over the second device layer. Each first blazed device structure generally includes a plurality of steps, a facet normal of each of the plurality of steps parallel to a primary surface of the first device layer, and a blaze angle defined by a blazed surface and the facet normal. The second grating generally includes a plurality of second blazed device structures arranged in a second direction, where the second direction is different than the first direction.

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