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

(72) Inventors: **KITAMURA, Shin**; 87-24 Honjyou, Narita-shi, Chiba-ken, Chiba 286-0114 (JP). **AOKI, Yuji**; 16-49 Suwazaka tsurumi-ku, Yokohama-shi, Kanagawa 221-0045 (JP).

(74) Agent: **TABOADA, Alan**; Moser Taboada, 1030 Broad Street, Suite 203, Shrewsbury, New Jersey 07702 (US).

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(54) Title: SUBSTRATE ORIENTER CHAMBER

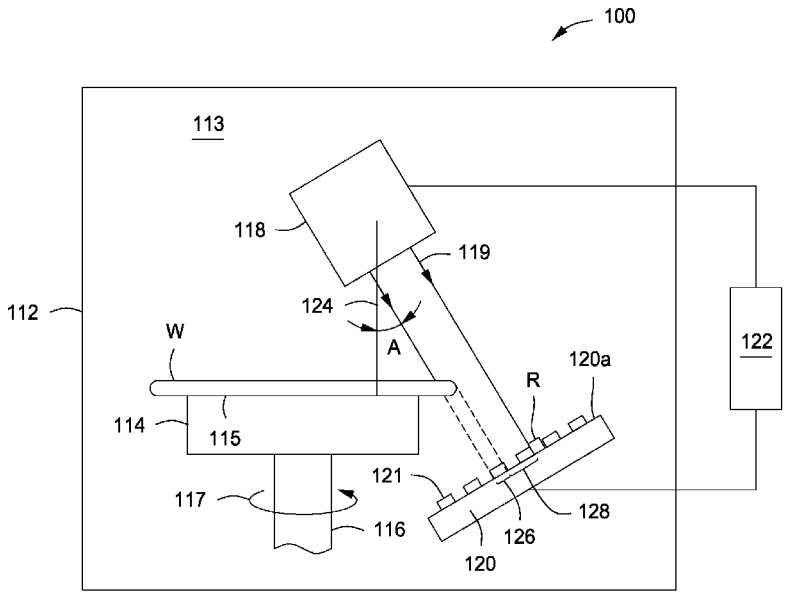


FIG. 1

(57) Abstract: Orienter chambers for determining the orientation of a substrate in a substrate processing system are provided. In some embodiments, an orienter chamber includes a housing enclosing an interior volume; a rotatable stage disposed inside the housing including a substrate support surface adapted to support a substrate; a light source disposed above the stage and positioned to provide illuminating light to the outer circumference of a substrate when the substrate is loaded on the rotatable stage, wherein the illuminating light from the light source is inclined toward the center of the substrate by an angle from a vertical line that extends perpendicular to the substrate support surface; a light-receiving unit having a light-receiving surface on which are arranged a plurality of light-receiving elements that receive the illuminating light from the light source; and an analysis unit that analyzes the illuminating light received by the light-receiving elements.

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