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(54) Title: NORMAL-INCIDENCE IN-SITU PROCESS MONITOR SENSOR

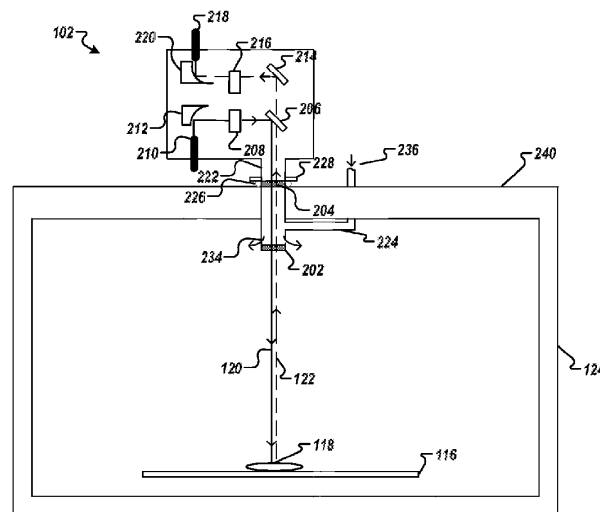


FIG. 2

(57) Abstract: An apparatus, a system, and a method for in-situ etching monitoring in a plasma processing chamber are provided. The apparatus includes a continuous wave broadband light source to generate incident light beam, an illumination system configured to illuminate an area on a substrate with an incident light beam being directed at normal incidence to the substrate, a collection system configured to collect a reflected light beam being reflected from the illuminated area on the substrate, and direct the reflected light beam to a detector, and processing circuitry. The processing circuitry is configured to process the reflected light beam to suppress background light, determine a property of the substrate or structures formed thereupon based on reference light beam and the reflected light beam that are processed to suppress the background light, and control an etch process based on the determined property.

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