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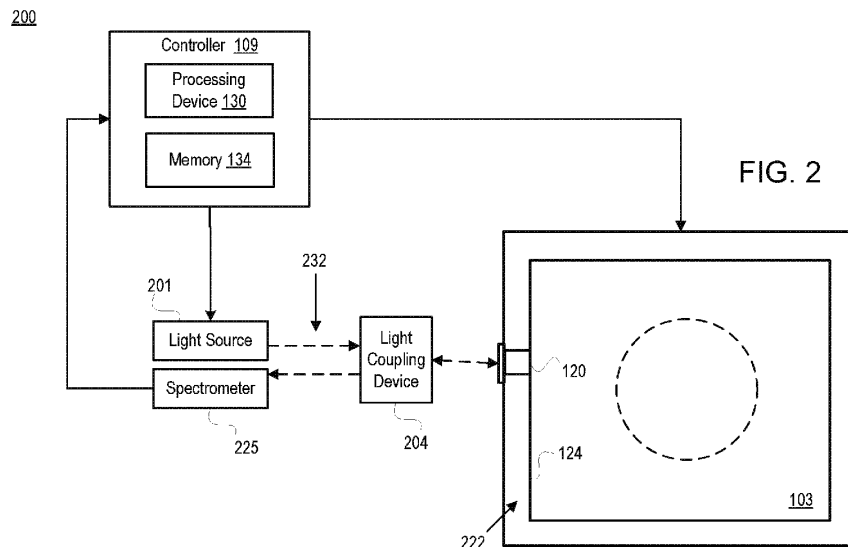
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(54) Title: THIN FILM, IN-SITU MEASUREMENT THROUGH TRANSPARENT CRYSTAL AND TRANSPARENT SUBSTRATE WITHIN PROCESSING CHAMBER WALL



(57) Abstract: A system includes a transparent crystal, at least part of which is embedded within a wall and a liner of a processing chamber. The transparent crystal has a proximal end and a distal end, the distal end having a distal surface exposed to an interior of the processing chamber. A transparent thin film is deposited on the distal surface and has chemical properties substantially matching those of the liner. A light coupling device is to: transmit light, from a light source, through the proximal end of the transparent crystal, and focus, into a spectrometer, light received reflected back from a combination of the distal surface, a surface of the transparent thin film, and a surface of a process film layer deposited on the transparent thin film. The spectrometer is to detect a first spectrum within the focused light that is representative of the process film layer.

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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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