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(54) Title: MONITORING SYSTEM COMPRISING INFRARED THERMOPILE DETECTOR

(57) Abstract: The present invention relates to a semiconductor processing system that employs infrared-based thermopile detector for process control, by analyzing a material of interest, based on absorption of infrared light at a characteristic wavelength by such material. Specifically, an infrared light beam is transmitted through a linear transmission path from an infrared light source through a sampling region containing material of interest into the thermopile detector. The linear transmission path reduces the risk of signal loss during transmission of the infrared light. The transmission path of the infrared light may comprise a highly smooth and reflective inner surface for minimizing such signal loss during transmission.

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