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Patent Search

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Invention Title	SIMPLIFIED SIGNAL CONDITIONING FOR UV SPECTROSCOPY BASED MULTIPLE GAS SENSING MODULE
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Abstract:

The present invention relates to a system (100) for detecting and measuring concentration of target gases by using a spectroscopy and a method (500). The system (100) includes detection module (102) configured to detect target gas from an airflow of the target gases, directed by sampling module (108) between source module (104) and sensor module (106), signal conditioning module (118) configured to perform the signal processing for received output of the sensor module (106), measuring module (130) configured to receive the output of the SC module (118) stored in memory (128) for calculating the concentration of the target gas using processor (116), output module (132) configured to convey the output of measuring module (130), power module (134) provides power supply to system (100) and PWM module (138) configured to generate PWM signal for controlling the activation and deactivation of sampling module (108) and the switching module (114).

Complete Specification

Description:FIELD OF THE INVENTION

The present invention relates to a monitoring system. Particularly, the present invention relates to a system for real-time monitoring of multiple gases present in an environment.

BACKGROUND OF THE INVENTION

The world is breathing contaminated air, caused by any chemical, physical agent, biological agent etc. that modifies the natural characteristics of an atmosphere. Air pollution requires both emergency response measures and long-term structural solutions, including prioritizing air pollution control, implementing effective pollution reduction strategies, and establishing robust air quality monitoring systems that can provide accurate information to the public, all aimed at creating cleaner and healthier environments. The air quality monitoring requires gas sensors to measure the concentration of the gases in the contaminated atmosphere.

The gas sensors are indispensable for solving and mitigating various gas-related problems through continual advancements. The gas sensors can be classified into direct and indirect types. The direct sensors measure gas concentrations directly in the gas phase and provide real-time analysis for example, electrochemical sensors