**LITERATURE SURVEY**

**Gas leakage detection and alerting system using Arduino Uno**

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The presence of hazardous LPG gas leakage in a domestic, work place, also, stored gases container gas which exhibits ideal characteristic is use. For that sake, an alarm unit is used to vibrate an alarm which is buzzer. Buzzer gives an audible sign of the presence of LPG volume. The sensors are widely used to detect essence of propane, iso-butane, LPG and even smoke. The sensor has an advantage to combine a sensitivity response time. If the LPG sensor senses gas leak from work place or home, sensor output goes to active low (logic-0) condition. Arduino UNO is used in the project; low signals are overlooked by the Arduino and gas leakage is been noticed by the Arduino. The Arduino UNO turns on the LCD and buzzer. It even turns on the GSM modem after that, it continues to send messages SMS to mobile number specifically mentioned in the program of the source code for alerting danger to the people.

<https://www.researchgate.net/publication/347495607_Gas_leakage_detection_and_alerting_system_using_Arduino_Uno>

# Sensor-Based Gas Leakage Detector System

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Liquefied Petroleum Gas (LPG) is the main source of fuel, especially in urban areas because it is clean compared to firewood and charcoal. Gas leakage is a major problem in the industrial sector, residential premises, etc. Nowadays, home security has become a major issue because of increasing gas leakage. Gas leakage is a source of great anxiety with ateliers, residential areas and vehicles like Compressed Natural Gas (CNG), buses, cars etc. One of the preventive and useful methods to stop accidents associated with the gas leakage is to install a gas leakage detection kit at vulnerable places which includes an alerting system for the users. Design of a gas leakage detection system, that can automatically detect, alert and control gas leakage. The system is based on a sensor that easily detects a gas leakage.

[*https://www.researchgate.net/publication/347326171\_Sensor-Based\_Gas\_Leakage\_Detector\_System/link/5fe12d2592851c13fead5a77/download*](https://www.researchgate.net/publication/347326171_Sensor-Based_Gas_Leakage_Detector_System/link/5fe12d2592851c13fead5a77/download)

**LPG Leakage Detector using Arduino with SMS Alert and Sound Alarm**

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Nowadays, LPG leakages is a mutual hindrance in household and manufacturing. “LPG Leakage Detector using Arduino with SMS Alert and Sound Alarm”, will be a great help in terms of preventing any danger caused by gas leakage. This is used to detect the presence of LPG leakage as a part of a safety system. Apart from sound alarm, an SMS alert system will inform the authorized person about the leakage and the solenoid valve will be triggered to shut down the gas supply to prevent any harmful effects due to the leakage. Usage of gas sensor is to monitor the LPG if the gas leak reaches beyond the normal level and it will trigger the sound alarm. In addition, the authorized person will be informed about the leakage via SMS alert and the gas supply will be automatically shut down. The people can be saved from a potential explosion caused by gas leakage.

[*https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.ijitee.org/wp-content/uploads/papers/v8i6c2/F10420486C219.pdf&ved=2ahUKEwjSgYz37qL6AhUK3TgGHa4fCWAQFnoECBQQAQ&usg=AOvVaw2Iu4WQYbaWTuO8FUignhCW*](https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.ijitee.org/wp-content/uploads/papers/v8i6c2/F10420486C219.pdf&ved=2ahUKEwjSgYz37qL6AhUK3TgGHa4fCWAQFnoECBQQAQ&usg=AOvVaw2Iu4WQYbaWTuO8FUignhCW)

**Hazardous Gas Detection and Alerting Using Sensors**

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Home safety has been a major issue in our day-to-day life and it is everyone’s duty to provide good safety system at home. The main objective is to eradicate hazardous gas from home using IoT. The Internet of Things (IoT) is a system of interrelated computing devices which has the feature of providing unique features without human-to-human or human-to-computer interaction. It aims at developing the home safety against the leakage of LPG gas. In case of any leakage it provides an SMS alert to the user using the GSM and switch off the gas knob or valve. In addition it also turnoff the power supply and inverter automatically in order provide a complete home safety. The sensors are used to monitor the leakage of the gas as sensor plays as important role in our day-to-day life. Sensors are of different kinds and are present in the different fields such as monitoring the health of old patients, sensing the environment, leakage of gas etc. Today every individual is living in a smart world and our entire house is based on automation system in order to prevent accidents and safeguard ourself.

[*https://www.google.com/url?sa=t&source=web&rct=j&url=https://ijirem.org/DOC/9\_hazardous-gas-detection-and-alerting-using-sensors.pdf&ved=2ahUKEwiVjqaBxKP6AhV06HMBHa9xDbEQFnoECDYQAQ&usg=AOvVaw2HxC-T7PfhQ9tVcSfEaHnq*](https://www.google.com/url?sa=t&source=web&rct=j&url=https://ijirem.org/DOC/9_hazardous-gas-detection-and-alerting-using-sensors.pdf&ved=2ahUKEwiVjqaBxKP6AhV06HMBHa9xDbEQFnoECDYQAQ&usg=AOvVaw2HxC-T7PfhQ9tVcSfEaHnq)