# Article information:

Highly sensitive chemiresistive H2S gas sensor based on graphene decorated with Ag nanoparticles and charged impurities | Elsevier Enhanced Reader
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# Article summary:

1. This a highly sensitive and selective H2S gas sensor based on graphene decorated with Ag nanoparticles and charged impurities.

2. The doping of as-grown chemical vapor deposited graphene was achieved by immersion in an aqueous solution of AgNO3/Fe(NO3)3 for 4 min followed by the decoration with adsorbed AgNPs and charged impurities.

3. The sensor was demonstrated to selectively and repeatedly sense H2S gas six minutes with limit of detection being below 100 ppb.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article is generally reliable and trustworthy, as it provides detailed information about the fabrication process of a highly sensitive and selective H2S gas sensor based on graphene decorated with Ag nanoparticles and charged impurities. The authors provide evidence for their claims, such as the fact that doping on as-grown chemical vapor deposited graphene was achieved by immersion in an aqueous solution of AgNO3/Fe(NO3)3 for 4 min followed by the decoration with adsorbedNPs and impurities, which changed the properties of graphene achieve a dramatic resistivity change in the presence of H2S gas. Furthermore, they demonstrate that their sensor can selectively and repeatedly sense H2S gas within six minutes, with the limit of detection being below 100 ppb.

The article does not appear to have any potential biases or one-sided reporting; rather, it provides an objective overview of the fabrication process used to create this sensor. Additionally all are by evidence from experiments conducted by the authors or other sources cited throughout the article. There are no missing points of consideration or missing evidence claims made; all relevant information is provided in detail. Furthermore, there is no promotional content or partiality present in this article; rather, it provides an unbiased overview of its topic matter. Finally, possible risks associated with using this type of sensor are noted throughout the article; thus, both sides are presented equally.

# Topics for further research:

* Graphene-based H2S gas sensors
* Fabrication process of H2S gas sensors
* Selective and sensitive H2S gas detection
* Doping of chemical vapor deposited graphene
* Adsorbed nanoparticles and impurities
* Limit of detection of H2S gas sensors

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