# Article information:

Metal-oxide semiconductors for carbon monoxide (CO) gas sensing: A review - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S235294071930602X>

# Article summary:

1. This review article summarizes recent progress on the development of metal-oxide semiconductor (MOS) based nanostructures for carbon monoxide (CO) gas sensors.

2. Commonly investigated classes of materials include MOSs (notably, zinc oxide and tin oxide), yttrium stabilized zirconium, cerium oxide, indium oxide, tungsten oxide, copper oxide, composite oxides etc.

3. Various synthesis/fabrication methods such as CVD, hydrothermal, screen printing, sputtering, spray pyrolysis, sol-gel, co-precipitation method, electrospinning and pechini method are discussed with their advantages and limitations.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

This review article provides a comprehensive overview of the development of metal-oxide semiconductor (MOS) based nanostructures for carbon monoxide (CO) gas sensors. The article is well written and provides a detailed description of the various materials used in CO gas sensing as well as the different synthesis/fabrication methods used to create these nanostructures. The article also discusses the effects of doping on the morphology of nanostructure and performance parameters of CO gas sensors.

The article is generally reliable and trustworthy in its content; however there are some potential biases that should be noted. For example, while the article does discuss some potential risks associated with CO gas sensing such as toxicity levels and health effects from inhalation at different concentrations, it does not provide any evidence to support these claims or explore any counterarguments that may exist. Additionally, while the article does mention some potential benefits associated with MOSs based CO gas sensors such as low cost and high sensitivity compared to other types of gas sensors, it does not present both sides equally or explore any possible drawbacks associated with this type of sensor technology.

In conclusion, this review article provides a comprehensive overview of metal-oxide semiconductor (MOS) based nanostructures for carbon monoxide (CO) gas sensing; however there are some potential biases that should be noted when evaluating its trustworthiness and reliability.

# Topics for further research:

* Carbon Monoxide Gas Sensor Health Effects
* Metal-Oxide Semiconductor Gas Sensor Advantages and Disadvantages
* Doping Effects on Nanostructure Morphology
* Low Cost Carbon Monoxide Gas Sensors
* Carbon Monoxide Gas Sensor Toxicity Levels
* Metal-Oxide Semiconductor Gas Sensor Fabrication Methods

# Report location:

<https://www.fullpicture.app/item/951d9eb1d2870b794dd5fe06d1d107fc>