# Article information:

A novel electrochemical sensor for simultaneous detection of Cd2+ and Pb2+ by MXene aerogel-CuO/carbon cloth flexible electrode based on oxygen vacancy and bismuth film - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0048969722054249>

# Article summary:

1. A novel MXene aerogel-CuO/carbon cloth (MXA-CuO/CC) electrochemical sensor was constructed for the simultaneous detection of Cd2+ and Pb2+.

2. The oxygen vacancies of CuO have a strong affinity for heavy metal ions, which promoted the adsorption of Cd2+ and Pb2+ on the electrode surface.

3. The constructed sensing electrode has excellent detection performance, with detection limits of 0.3 μg L−1 (Cd2+) and 0.2 μg L−1 (Pb2+).

# 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 article presents a novel electrochemical sensor for simultaneous detection of Cd2+ and Pb2+, based on MXene aerogel-CuO/carbon cloth flexible electrode with oxygen vacancy and bismuth film. The article is well written and provides detailed information about the construction of the sensor, its performance, and its application in food and water samples. The authors provide evidence to support their claims, such as differential pulse anodic stripping voltammetry results, inductively coupled plasma mass spectrometry results, atomic absorption spectroscopy results, etc., which makes it reliable and trustworthy.

However, there are some points that could be improved in this article. For example, the authors do not discuss any potential risks associated with using this sensor or any possible side effects that may arise from its use. Additionally, they do not explore any counterarguments or present both sides equally when discussing the advantages of using this sensor over other methods such as atomic absorption spectroscopy or inductively coupled plasma emission spectrometry. Furthermore, there is no mention of any promotional content in the article which could be seen as biased towards their own research findings.

In conclusion, this article is generally reliable and trustworthy but could benefit from further exploration into potential risks associated with using this sensor as well as exploring counterarguments to their own claims more thoroughly in order to present both sides equally without bias or promotional content.

# Topics for further research:

* Potential risks of electrochemical sensors
* Side effects of electrochemical sensors
* Advantages of electrochemical sensors over other methods
* Atomic absorption spectroscopy
* Inductively coupled plasma emission spectrometry
* Promotional content in scientific articles

# Report location:

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