# Article information:

Clean synthesis of adipic acid from cyclohexene in microemulsions with stearyl dimethyl benzyl ammonium chloride as surfactant: From the laboratory to bench scale - ScienceDirect
<https://www.sciencedirect.com/science/article/pii/S1385894712007620>

# Article summary:

1. Adipic acid is primarily used in the manufacture of nylon-6,6 polyamide and its production is a major source of industrial nitrous oxide emissions.

2. A clean technology for synthesizing adipic acid from cyclohexene and hydrogen peroxide in microemulsions with a non-polluting catalyst and surfactant has been developed at pilot scale.

3. The reuse of the reaction media enabled the conversion to be increased up to 92%, but yields decreased over subsequent cycles due to loss of surfactant and/or catalyst.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

该文章主要介绍了一种从环己烯中合成己二酸的清洁技术，并评估其在工业实践中的可行性。然而，该文章存在以下问题：

1. 偏见来源：文章没有提及其他可能存在的清洁技术或者与该技术相比的优缺点，使得读者无法全面了解该技术的优越性。

2. 片面报道：文章只关注了产生温室气体N2O的传统方法，但并未探讨其他可能导致环境问题的因素，如废水处理、废物处理等。

3. 无根据主张：文章声称使用非重金属催化剂和表面活性剂可以减少对环境的影响，但并未提供相关证据支持这一观点。

4. 缺失考虑点：文章没有考虑到在大规模生产过程中可能出现的风险和不确定性，如原材料供应、能源消耗等。

5. 所提出主张缺乏证据：文章声称使用微乳液可以提高反应效率和产量，但并未提供详细数据或实验结果来支持这一观点。

6. 未探索反驳：文章没有探讨其他学者或机构对该清洁技术的看法或反驳意见，使得读者无法全面了解该技术的优缺点。

7. 宣传内容：文章过于强调该清洁技术的优越性，可能存在宣传嫌疑。

综上所述，该文章存在一些偏见、片面报道和未提供充分证据的问题。在未来的研究中，应更加全面地考虑到各种因素，并探讨其他学者或机构对该技术的看法和反驳意见。

# Topics for further research:

* Alternative clean technologies for producing adipic acid
* Other environmental concerns in adipic acid production
* Evidence supporting the use of non-heavy metal catalysts and surfactants
* Risks and uncertainties in large-scale production of adipic acid
* Data and results supporting the use of microemulsions in adipic acid synthesis
* Criticisms or alternative perspectives on the proposed clean technology for adipic acid production

# Report location:

<https://www.fullpicture.app/item/0f2f7c2b1927111b6a96bd300b21d35e>