# Article information:

Cable bacteria extend the impacts of elevated dissolved oxygen into anoxic sediments | The ISME Journal
<https://www.nature.com/articles/s41396-020-00869-8>

# Article summary:

1. Elevated dissolved oxygen (eDO) can extend its impacts into anoxic sediments through the presence of cable bacteria, which use long-distance electron transfer to harvest electron donors and deposit electrons on acceptors.

2. Cable bacteria can promote sulfate replete conditions in sediment, fueling the oxidation of pollutants such as polycyclic aromatic hydrocarbons (PAHs) coupled with sulfate reduction.

3. The presence of cable bacteria under eDO can significantly alter indigenous microbial diversity and reinforce community interactions, promoting the cascade degradation of sediment PAHs.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

该文章介绍了一项研究，探讨了电缆细菌在高溶解氧条件下对水体底部沉积物中有机污染物的影响。然而，该文章存在以下问题：

1. 偏见来源：该文章没有提及任何可能的负面影响或风险，只强调了电缆细菌在沉积物中的潜在作用。这种偏袒可能是由于作者与电缆细菌相关的研究背景和利益有关。

2. 片面报道：该文章只关注了电缆细菌对沉积物中有机污染物的降解作用，而忽略了其他微生物和环境因素对底部沉积物生态系统的影响。

3. 缺失考虑点：该文章没有考虑到高溶解氧条件下可能会导致水体中其他生物群落的变化，并且没有探讨这些变化可能会如何影响整个水生态系统。

4. 主张缺乏证据：该文章提出了电缆细菌可以促进底部沉积物中有机污染物的降解，但并没有提供足够的实验证据来支持这一主张。

5. 未探索反驳：该文章没有探讨其他可能的解释或反驳，例如电缆细菌对沉积物中有机污染物的降解作用是否受到其他环境因素的影响。

6. 宣传内容：该文章过于宣传电缆细菌在底部沉积物生态系统中的重要性，而忽略了其他微生物和环境因素的作用。

总之，该文章存在一些偏见、片面报道、缺失考虑点和证据不足等问题。未来的研究应该更加全面地考虑底部沉积物生态系统中各种微生物和环境因素之间的相互作用。

# Topics for further research:

* Potential negative impacts or risks
* Other microbial and environmental factors in sediment ecosystems
* Effects of high dissolved oxygen on other aquatic communities
* Lack of sufficient evidence to support claims
* Other possible explanations or counterarguments
* Overemphasis on cable bacteria and neglect of other factors

# Report location:

<https://www.fullpicture.app/item/2955a76a4cd55b43806484d5a58bd3dc>