# Article information:

An integral non-intrusive electrochemical and in-situ optical technique for the study of the effectiveness of corrosion inhibition - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0013468621019034>

# Article summary:

1. This article presents an integrated analysis of in-situ optical data and time-frequency information from electrochemical potential noise (EPN) data to study the effectiveness and durability of corrosion inhibitors.

2. Two different corrosion inhibiting species, cerium(III) (Ce(III)) and phytic acid (PHA), are tested on aluminum alloy AA2024-T3.

3. Both Ce(III) and PHA were not capable to inhibit corrosion to a large extent, as re-immersion led to electrochemical (corrosion) activity for both inhibitors.

# 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 an integrated analysis of in-situ optical data and time-frequency information from electrochemical potential noise (EPN) data to study the effectiveness and durability of corrosion inhibitors. The article is well written, with clear explanations of the methodology used and results obtained. The authors provide sufficient evidence for their claims, including figures that illustrate the results obtained from their experiments.

The article does not appear to be biased or one-sided in its reporting, as it provides a balanced view of both positive and negative results obtained from the experiments conducted. It also does not contain any promotional content or partiality towards any particular product or method. Furthermore, possible risks associated with using corrosion inhibitors are noted in the article, which is important for readers to consider before attempting similar experiments themselves.

The only potential issue with this article is that it does not explore counterarguments or present both sides equally when discussing the results obtained from the experiments conducted. For example, while it is noted that both Ce(III) and PHA were not capable to inhibit corrosion effectively after re-immersion, there is no discussion about why this might be the case or what other factors could have contributed to this result.

# Topics for further research:

* Corrosion inhibitor effectiveness
* Corrosion inhibitor durability
* In-situ optical data analysis
* Time-frequency electrochemical potential noise
* Corrosion inhibitor risks
* Factors affecting corrosion inhibitor performance

# Report location:

<https://www.fullpicture.app/item/97e9f24b2dcbecab243c3e977056c1a6>