# Article information:

Tandem In2O3-Pt/Al2O3 catalyst for coupling of propane dehydrogenation to selective H2 combustion | Science
<https://www.science.org/doi/10.1126/science.abd4441>

# Article summary:

1. The authors developed a nanoscale tandem catalyst for the selective catalytic dehydrogenation of propane to propylene.

2. The catalyst was created by growing an In2O3 shell over a Pt/Al2O3 propane dehydrogenation catalyst, which exposed the platinum nanoparticles for propane dehydrogenation and oxidized surface hydrogen atoms at the interface.

3. This approach boosted yields of propylene to up to 30%, providing an opportunity for highly selective catalytic performance in a grand challenge reaction.

# 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:

The article is generally reliable and trustworthy, as it provides evidence-based research that is well-supported by data and experiments. The authors provide detailed descriptions of their methodology, results, and conclusions, making it easy to follow their thought process and understand their findings. Additionally, they cite relevant literature throughout the article to support their claims and provide further context for their work.

However, there are some potential biases in the article that should be noted. For example, the authors focus primarily on the benefits of their proposed tandem catalyst without exploring any potential risks or drawbacks associated with its use. Additionally, they do not present any counterarguments or alternative solutions to the problem they are addressing, which could lead readers to believe that this is the only viable solution available. Finally, there is some promotional content in the article as well; while this does not necessarily detract from its overall reliability or trustworthiness, it should be noted that it may influence readers’ opinions of the research presented.

# Topics for further research:

* Potential risks of tandem catalysts
* Alternative solutions to catalytic reactions
* Counterarguments to tandem catalysts
* Evidence-based research on catalytic reactions
* Promotional content in scientific research
* Benefits of tandem catalysts

# Report location:

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