

## Current Challenges in Catalytic Science to Achieve a Net Zero World

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Designing new catalysts is a topic of intense research interest in the scientific community. Catalysis is crucial for the manufacture of many of the materials we use and need in our everyday lives. However, most chemicals are made from fossil carbon and there is now a move to transition to sources of carbon that are renewable. This presents many challenges and this presentation will introduce some of these. The presentation will then introduce some of the latest research using gold and palladium catalysts; namely the recently discovered cooperative redox enhancement (CORE) effect and the use of in situ generation of hydrogen peroxide to produce chemicals.

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