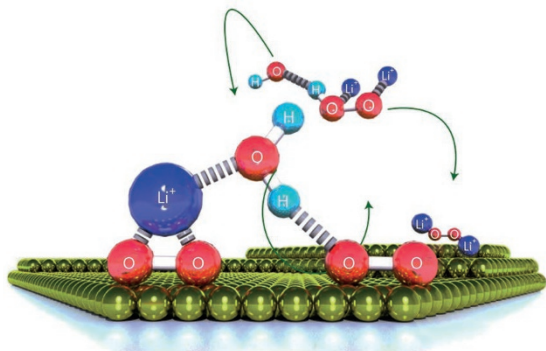


IN BRIEF

HETEROGENEOUS CATALYSIS

The importance of interfacial interactions



There are many challenges in developing technologies for carbon-neutral energy production and storage. For example, if we can drive electrochemical water splitting with renewable energy sources, we would have a sustainable route to hydrogen as a fuel. Likewise, the use of both hydrogen and oxygen in fuel cells and metal–air batteries is an intense topic of research and many efforts are targeted at implementing new materials for these purposes.

Nenad Markovic and colleagues at the Argonne National Laboratory have summarized in *Nature Materials* the recent developments in materials for both the formation and use of hydrogen and oxygen. They focus on summarizing our fundamental understanding of the processes that take place at the electrochemical interface — the region where the solid electrode contacts the liquid electrolyte. Understanding interactions at this scale enables one to predict the performance of an electrochemical system, and will enable the rational design of efficient water-based energy conversion and storage systems.

Bryden Le Bailly, Associate Editor, Nature

ORIGINAL ARTICLE Stamenkovic, V. R. et al. Energy and fuels from electrochemical interfaces. *Nat. Mater.* **16**, 57–69 (2017)