Hydrogen Based Appliances

Hydrogen is a clean energy vector that can enable zero emission and a decarbonised economy. Development of suitable technology to utilise hydrogen safely and with high efficiency will enable the transition this a new economy based on the use of hydrogen.

Competitive advantage

- Unique world class expertise in the design/conversion of common appliances effectively using hydrogen as a fuel to generate electricity or heat. Expertise for the integration into existing infrastructures
- Hydrogen can be used with a fuel cell to generate electricity with high efficiency and water a sole emission
- Hydrogen can be catalytically burnt to generate heat to do work
- Robust and simple technology based on the most advanced innovative solutions developed at UNSW

Impact

- Potential to revolutionise the way hydrogen can be used in everyday life and facilitate the transition to a hydrogen based economy.

Successful applications

- Hy-cycle, hydrogen powered bicycle demonstrating the effective use of hydrogen with a fuel cell to generate electricity on-board a bicycle
- H2Q, a hydrogen powered BBQ, catalytically burning hydrogen without any flame

Capabilities and facilities

- State of the art research facility for designing and testing appliances/devices effectively using hydrogen
- Prototyping and optimisation capability

More Information

Professor Francois Aguey-Zinsou

School of Chemical Engineering

T: +61 (0) 2 9385 7970
E: f.aguey@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61 (2) 9385 5008