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Automotive Fuel Cells: A U.K. Perspective

The Institution of Mechanical Engineers held a one-day conference in London on 28th February on Fuel Cells for Automotive Applications. The main topics discussed were technical issues, implementation of the technology and potential markets.

Melanie Sadler (QinetiQ) addressed challenges and developments across the entire spectrum of fuel cell vehicles, paying attention to fuel storage and cost reduction. Achieving lower costs has been examined for many components, including the noble metal content in electrodes. Careful use of chemistry and engineering ought to optimise the platinum and ruthenium content in a fuel cell.

Work with alkaline fuel cells was described by A. Willett (Fuel Cell Systems). These were the first fuel cells to be seriously demonstrated (by Francis Bacon in 1959). NASA have used alkaline fuel cells with platinum group metal electrodes since the Apollo programme. The low operating temperature provides some benefits for vehicles, but carbon dioxide has to be removed from the air intake. This technology has 'trickle-charged' an electric taxi.

Chris Dudfield (Intelligent Energy) gave details on more conventional platinum-based proton exchange membrane technology for sole power in a car. He listed many prototypes using this technology.

A project underway to put a fuel cell into use in the town of Woking, U.K., was described by J. Kenna (Energy for Sustainable Development). He showed the logistical and regulatory challenges which lie even beyond the immediate technical hurdles.

Finally, the motion: 'This house believes that the fuel cell electric vehicle will comprise 10% of a new car market in 2010', was defeated, despite strong support from Gary Acres (Consultant) and many positive comments. Professor James Randle (University of Birmingham) won the day. Nonetheless, the impression was given of a market almost on the verge of expansion. D. M. JOLLIE

David Jollie is Manager of the online resource Fuel Cell Today (fuelcelltoday.com), sponsored by Johnson Matthey, Hatton Garden, London. David's main interests are the industrial development and utilisation of fuel cells.

Fuel Cells: Science and Technology 2002

The next Grove-organised fuel cell conference 'Scientific Advances in Fuel Cell Systems' takes place in Amsterdam on 25th and 26th September. Topics covered will include materials (and membranes), stack and cell engineering, electrochemistry and catalysis, fuel processing, hydrogen storage and distribution and balance of plant. For further information please contact Ms C. Norris, Fax: +44 (0)118 377 4696; E-mail: claire@eventive.org.uk.

Catalysis for Low Temperature Fuel Cells

Unfortunately publication of the second part of this paper has had to be postponed until a later issue. We apologise to readers who were hoping to read this item in this issue of *Platinum Metals Review*.