simultaneous use of *in situ* second harmonic generation (SHG) and cyclic voltammetry to elucidate the structural and electronic behaviour of Au(111) surfaces during camphor adsorption and desorption. More generally, R. J. Nichols (University of Liverpool, U.K.) described the use of *in situ* FTIR in the attenuated total reflectance mode to study the surface chemistry of Si(111) during etching in alkaline solution.

Catalysis

In the first of two sections on catalysis, Professor G. A. Attard (Cardiff University, U.K.) described the influence of anions and kink structure on the enantioselective electrooxidation of glucose. P. A. Christensen (Newcastle University, U.K.) presented *in situ* FTIR studies on the effect of temperature on the electrooxidation of formaldehyde, formic acid and methanol at Ru(0001) electrodes in perchloric acid solution. The results were compared with prior ones obtained from the adsorption of CO under similar conditions.

The three papers in the second set of catalysis papers had a common theme of electrochemical oxidation of CO adsorbed on Pt and Pt/Ru electrodes. Professor M. T. M. Koper (Eindhoven University of Technology, The Netherlands) studied the dynamics of CO at the solid/liquid interface by simulation of CO electrooxidation on Pt and PtRu electrodes. Professor D. A. Scherson (Case Western Reserve University, U.S.A.) described the use of *in situ* potential step SHG to study the electrochemical oxidation of adsorbed CO on Pt(111) in aqueous electrolytes.

The use of electrochemical NMR to study surface diffusion of chemisorbed CO (from methanol electrochemisorption) on Pt and Pt/Ru nanoparticles in the presence of supported electrolyte was described by Y. Y. Tong (Georgetown University, U.S.A.). The activation energy, deduced from temperature-dependent nuclear spin-spin and spin-lattice relaxation measurements, correlated with the steady state current for methanol electrooxidation. A simple two-dimensional collision theory model was proposed to explain the results. The paper suggested that in addition to the conventional bifunctional mechanism, surface dynamic effects may play a more important role in enhancing CO tolerance in Pt/Ru fuel cell catalysts than has previously been suggested.

Adsorbed Layers and Films

In the final group of papers, Professor R. J. Forster (Dublin City University, Ireland) described the use of transient emission spectroscopy and cyclic voltammetry to investigate the ground and excited states of monolayers and trimers of novel osmium complexes in solution. Professor A. R. Hillman (University of Leicester, U.K.) reported the dynamics of regioregular conducting polymer electrodes in response to electrochemical stimuli.

Conclusions

Given the complicated nature of the electrode-electrolyte interface, many of the mechanisms are controversial. It is therefore not surprising that some conclusions attracted energetic debate. However, as Professor D. E. Williams (University College London, U.K.) stated in his concluding remarks, the event had great benefit and relevance.

The forum created a stimulating environment enabling specialists to suggest alternative explanations and propose further experiments. It was of major importance in reviewing the state of electrochemistry and shaping directions of future work on the electrode interface. With many advanced analytical tools available, the field is very exciting and still has many challenges to be overcome.

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Platinum Coatings in Memory Capacitors

The production of a Pt film which has continuous smoothness and good step coverage, useful in capacitors, such as container capacitors for memory cells, is described in a patent by E. P. Marsh of Micron Technology Inc. (*U.S. Patent* 6,387,802). The Pt film is deposited by CVD from a Pt-based organic precursor in an inert carrier gas onto a substrate, such as TiN, which coats a silicon substrate. Ultraviolet light is used to decompose the precursor during or following the CVD. The film finally undergoes low-temperature annealing in oxygen to avoid metal silicide formation.