

monoxide inserts again into the Pd-C bond and forms another C-C bond, which increases the length of the polyketone, see Figure 3.

### Palladium in Chiral Catalysis

Chiral catalysis is a rapidly advancing field and the advent of chiral C-C bond formation is at the leading edge of this research. J. M. Brown, of Oxford University, described the palladium catalysed Heck reaction. He showed that for this reaction the yields and enantiomeric excess of the products depended on the base, see Figure 4.

The conference was very informative on new

developments and progress in the use of the platinum group metals for catalysis. It is proposed that the second Anglo-Dutch Symposium will be held on 25 and 26 September 1997 in the conference hall of the Royal Academy of Arts and Science in Amsterdam. The organisers are Professors C. J. Elsevier, G. van Koten and K. Vrieze.

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### Iridium Microelectrode Array for Trace Metal Detection

The accurate detection of pollutants in natural waters is of continuing importance to the authorities who police water quality and to the water user. There are a variety of laboratory-based methods for detecting and measuring the amounts of toxic pollutants, including heavy metals, in water. Now, an improvement to an iridium microelectrode (*Platinum Metals Rev.*, 1995, 39, (3), 132) is reported, which was developed to detect lead and cadmium in river water.

The earlier microelectrode could detect trace amounts of free cadmium and lead in concentrations as low as 0.5 nM and 0.1 nM, respectively. The group that developed this iridium microelectrode now reports an improved design, with lower detection limits (C. Belmont, M.-L. Tercier and J. Buffle, the Department of Inorganic, Analytical and Applied Chemistry, Sciences II, Geneva, and G. C. Fiaccabrino and M. Koudelka-Hep, Institute of Microtechnology, University of Neuchâtel, Switzerland, *Anal.*

*Chim. Acta*, 1996, 329, (3), 203-214).

The new amperometric microsensor is constructed by successively evaporating iridium and silicon nitride both to a thickness of 2000 Å onto a silicon wafer, followed by photolithographic patterning. The microdisc iridium electrodes of size 5 µm diameter, separated by 150 µm to avoid overlapping of diffusion layers, in 10 × 10 arrays were then bonded to printed circuit board and encapsulated by epoxy resin. Mercury was electroplated onto the iridium microarray. After assessing the reproducibility and reliability of the array, trace metal analyses were performed by the square wave anodic stripping voltammetry technique.

The array had good stability over long periods of time and there was good reproducibility between different arrays. In river water containing lead and cadmium a detection limit of 50 pM was established, which is an improvement upon the earlier, simpler sensor design.

### The Fifth Grove Fuel Cell Symposium

Like the earlier highly successful symposia, this fifth meeting will be held at the Commonwealth Institute, London, England, from 22nd to 25th September 1997, and is again being run under the aegis of Elsevier Advanced Technology.

The Grove Fuel Cell Symposium is one of the major events where scientists from academia and industry can discuss fuel cell technology. World authorities will provide an up-to-date review of fuel cells and their use in clean stationary power and transport applications, focusing on business development and investment opportunities, key technological advances, and leading edge research results. In addition to the oral presentations on

these themes, keynote speakers will focus on the environment as a business and investment opportunity. A question-and-answer led session, with a panel of internationally recognised experts from the fuel cell industry and the business world will provide the opportunity for debate. The symposium will once again feature a technical poster session to which contributions are invited.

Anyone wishing to obtain further information should contact Sharron Emsley, Fifth Grove Fuel Cell Symposium, Elsevier Advanced Technology, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, U.K. Fax: +44 (0)1865 843958; E-mail: s.emsley@elsevier.co.uk.