

### **Dr David McCalley** **Joint Winner of the 2008 Chromatographic Society Jubilee Medal**



Dr David McCalley is Reader in Separation Science at the University of the West of England in Bristol.

His first employment after leaving school was at Kodak Research Laboratories in London, where he worked as a technician involved in the analysis of photographic solutions and the assessment of competitor products, using mostly classical techniques such as titrimetry and gravimetry.

He subsequently studied for a degree in Chemistry at the University of Bristol, and continued for a Master's Degree in Analytical Chemistry, which he was awarded with commendation and was the course prizewinner. Here he first learned in detail about chromatographic separations and applied this knowledge in a project involving the detection of metabolic diseases in infancy using gas chromatography. He was then employed by the Department of the Environment in a project based at Imperial College, looking at metal contamination of agricultural land due to natural geological features and by historical mining and smelting activities, using atomic absorption and plasma emission spectroscopy. He returned to the University of Bristol to undertake a PhD in the assessment of environmental pollution by sterols, mainly using capillary GC and mass spectrometry under the direction of Dr Graham Nickless, a previous winner of the Silver Jubilee Medal.

After completion of his studies, he was appointed lecturer, Principal Lecturer and then Reader at the University of the West of England (UWE) in Bristol. Here his research work has mainly been with HPLC, where he has investigated extensively the mechanism of reversed-phase separations including overloading effects, effect of pH and its measurement in aqueous-organic solutions and kinetic effects for "difficult" compounds. He has worked particularly with pharmaceutical and biomedically important compounds, as these areas of study are closely related to his teaching commitments at UWE. His current work includes studies of hydrophilic interaction chromatography (HILIC) as an alternative to reversed-phase HPLC for the analysis of pharmaceuticals, and also studies of the fundamental effects of pressure and temperature in HPLC and ultra high pressure LC. He continues to work also with GC, where his group was among the first to measure oestrogens, responsible for producing sex changes in fish, in U.K. river waters at ng l<sup>-1</sup> levels using GC linked with negative chemical ionisation mass spectrometry.

## Jubilee Medal

David has received funding for his research from the pharmaceutical industry, the Environment Agency, and from chromatographic instrument companies and column manufacturers. He has research links with numerous academic and industrial partners including past Chromsoc awardees Dr Lloyd Snyder and Dr Melvin Euerby. He has over 60 refereed publications in major international scientific journals, and received a top cited article award from the Journal of Chromatography for the period 2001-2006.

He has lectured widely internationally, including recent invited lectures at HPLC 2007 in Ghent, the 2007 Hungarian Balaton symposium (for which he also served as a member of the International Scientific Committee), University of Tübingen, Germany (2006) and the Pittcon Symposium (2007) in Chicago. He acts as a referee for a number of major international journals concerned with separation science, including Analytical Chemistry, Journal of Chromatography (A and B) and the Journal of Separation Science.