

OBITUARY

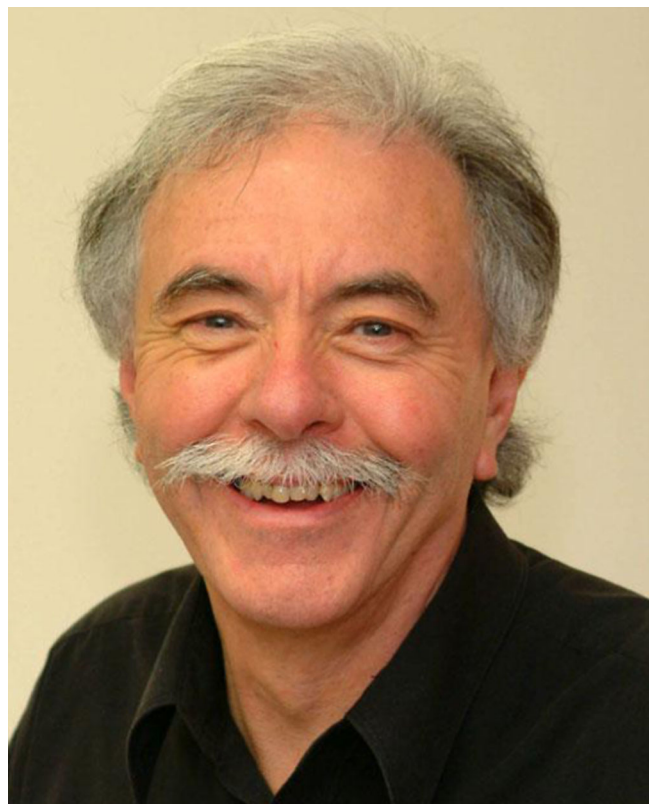
Peter John Derrick (1945–2017)

World-renowned expert in mass spectrometry, Peter John Derrick was born on 7 June 1945 near Fareham in Hampshire (UK). Peter spent his early years in southeast England, remaining close to Portsmouth, where the aircraft carrier HMS *Indomitable* on which his father served was docked. A product of the 11-plus system that enabled bright students to attend Grammar Schools, he went on to obtain both a Bachelor of Science with Honors in Chemistry (1966) and a Ph.D. in Physical Chemistry (1969) from Kings College London.

Peter held the first ever Royal Society European Fellowship in Stockholm at KTH Royal Institute of Technology (1969–1970), where he experimented with, among other things, photoelectron spectroscopy, state-selected mass spectrometry, and vibrational spectroscopy to probe the electronic structures of organic molecules. In Sweden, Peter developed a lifelong taste for working abroad and met his future wife, Kärsti. Highly-cited publications from this period on the electronic structure of medium-sized organic molecules helped forge an enduring international profile.

From 1971 to 1972, Peter continued his innovative work on field ionization kinetics at the Space Sciences Laboratory, University of California, Berkeley, having previously developed a method of measuring rates of unimolecular reactions in the picosecond time-frame as a postgraduate with A. J. B. Robertson. Peter also worked with Al Burlingame on landmark biennial reviews of mass spectrometry for *Analytical Chemistry*. Assessing the most important and recent results in the field, these reviews had a profound influence on the future direction of mass spectrometry.

In 1973, Peter returned to the UK as a recipient of the prestigious Ramsay Memorial Fellowship at University College London. Two years later he was on the move again, this time venturing further afield and settling in the antipodes. In 1975, Peter took up a position as Lecturer in the Department of Physical Chemistry at La Trobe University in Melbourne. He built upon his earlier work at Kings College London and KTH, and with the aid of a skilled workshop, constructed a number of pioneering instruments for field ionization and desorption studies. Peter climbed quickly up the academic ranks, becoming Senior Lecturer in 1977 and Reader in 1978, while his grand-scale magnetic-sector mass spectrometer became the stuff of legends. Boasting a 7-ton laminated magnet and 1-meter radius electric sector, the instrument aimed to provide for analyses of what was then considered very high mass ions (up to 20,000 or more). At La Trobe, and in his



subsequent roles, Peter was able to attract talented students to work with him, with applications taking advantage of the instrument's high-resolution, long-lifetimes, or high-mass capabilities enabling the study of peptides and polymers.

In 1981, Peter became the youngest ever full professor at the University of New South Wales (UNSW; Australia). He was appointed Professor of Physical Chemistry (1981–1987), Head, Department of Physical Chemistry (1981–1987), and later Head, School of Chemistry (1985–1987). At UNSW, Peter added an enduring interest in Fourier transform ion cyclotron resonance mass spectrometry (FT-ICR) with further applications to peptides and polymers.

Peter took his grand mass spectrometer with him to Sydney (where he also built an early TOF/TOF mass spectrometer) and later to the UK, when he returned to his home country to join the University of Warwick. As Kratos Research Professor of Mass Spectrometry (1987–1994), Professor of Chemistry (1987–2007), Director, Institute of Mass Spectrometry

(1988–2007), and Head, Department of Chemistry (1995–2007), Peter continued to develop a series of novel instruments, focussing on, among other things, time-of-flight mass spectrometry. In 1995, with Keith Jennings, he won a bid to host a National FT-ICR (9.4 T FT-ICR MS) facility, which became a focal point for a number of important biological applications. In collaboration with Dave Haddleton, work from this period resulted in numerous substantial contributions to the analyses of polymers by mass spectrometry. Peter also led the development of the Department of Chemistry at Warwick, taking it from a three- to five-star rated department in the UK Research Assessment Exercises. His innate ability to attract talented people around him and to foster and encourage their own development remained characteristic throughout his life and career.

After two decades at Warwick, Peter embarked on a new stage of his career, moving to New Zealand to assume the role of Head of the Institute of Fundamental Sciences (2007–2012) and Professor of Physical Chemistry and Chemical Physics (2007–2012) at Massey University. Doctoral students at Warwick followed in order to use his technology, while Peter undertook pioneering work in petroleomics. In 2013, he became Professor of Biophysics at the University of Auckland, his zest for research never ceasing.

Peter was President of the New Zealand Institute of Physics, and a Fellow of the Royal Society of New Zealand, the New Zealand Institute of Chemistry, the Institute of Physics (UK),

the Royal Society of Chemistry (UK), the Royal Australian Chemical Institute (RACI), and the Australian and New Zealand Society for Mass Spectrometry. He was also a member of the American Society for Mass Spectrometry.

Peter co-founded, with the late Professor Allan Maccoll, and was Editor-in-Chief of the *European Journal of Mass Spectrometry*. He continued to devote enormous time and energy to the journal; as Ian Michael (IM Publications LLP) wrote recently that the journal would not have existed without Peter. He received numerous distinguished prizes and awards over the course of his career. In 2007, Peter received the Royal Society of Chemistry (RSC) Thermo Fisher Scientific Award; in 2009, he was awarded the Morrison Medal from the Australian and New Zealand Society for Mass Spectrometry (ANZSMS). Peter was a Meldola Medallist of the RSC and Rennie Medallist of the Royal Australian Chemical Institute (RACI). In 2015, he received the ANZSMS's highest award, the ANZSMS Medal, which had been awarded only twice before (to the late Jim Morrison in 2009 and John Bowie in 2011). Peter is survived by his wife, Kärsti, and two children, Emma and Oliver, as well as his son-in-law, Mark, and two grandchildren, Milla and Remy, all of whom he was immensely proud.

Margaret Sheil

*The University of Melbourne
Parkville, Australia*