

Vale: Alan James PARKER (1933-1982)

On the morning of 30 August 1982, Australian chemistry lost one of its most distinguished scholars, the University of Western Australia one of its most distinguished graduates, Murdoch University a shining light in research and teaching achievement and many of us, who had been privileged, lost a friend who lived by the highest standards of professional ethics and human concern.

Jim Parker died suddenly at his home following only the briefest period of concern about his health. One of the most prestigious and active research units in Australia has lost an inspirational leader at the peak of his creative productivity.



His wife Lesley, herself a prize winning graduate in organic chemistry, and four sons aged from twenty-two to fourteen, lost a father committed to his family and their future.

After being Dux of Wesley College in 1950, Jim entered the University of Western Australia, graduated with distinctions in both organic and physical chemistry, gained first class honours in 1954 and his doctoral thesis "The Mechanism of Aromatic Nucleophilic Substitution Reactions", submitted in 1957, was praised highly and led to five publications.

After a year at the University of Southern California, where Professor Norman Kharash gave significant advice and introduced him to sulfur chemistry, he moved, with many other Australians, to the University College London to work with Sir Christopher Ingold. It was here that his insight into non-aqueous chemistry developed. His review publication in Quarterly Reviews was a significant qualitative explanation of solvent effects on the rate of organic substitution reactions.

Following his return to the University of Western Australia as a Senior Lecturer in 1962 and later as Reader, 1966, he worked on developing thermodynamic measures of solute-solvent interaction which could be used in the interpretation of rate data. He made outstanding practical advances in applying separate thermodynamic functions to ions. His contributions broadened to the total range of electrochemical and thermodynamic techniques and the quantitative understanding of rate determination in solution. This development can be traced through significant review articles.

In 1968, Jim Parker moved to a position as Professorial Fellow in the Research School of Chemistry at the Australian National University in Canberra. The increasing quantity and accuracy of his work, providing a range of enthalpy and entropy data to add to the existing free energy values, logically led him to the consideration of models of the

structure of solutions. During all this time he grew from a specialist in organic reaction mechanisms to a scientist of international status covering most areas of solution chemistry. His own predisposition to applying his knowledge, clearly a legacy from his father Sir John Parker, a distinguished Western Australian engineer, gradually produced a conviction that applied chemistry in all areas was retarded by our preoccupation with water as a solvent. Professor Arthur Birch, as the Head of the Research School of Chemistry, gave him great encouragement in pursuing research on industrial and commercial applications of non-aqueous chemistry.

His latter years in Canberra and at Murdoch University where he was appointed as inaugural Professor of Chemistry in 1973 and Director of his own Mineral Chemistry Research Unit were absorbed in practical applications of non-aqueous solvent chemistry to areas as diverse as mineral extraction, metal purification and recovery, battery development and new methods for the production of solar cells. This work produced over 20 patents or provisional applications to add to an unfinished list of over 120 publications. His work on copper extraction and purification has been evaluated for pilot plant development. In all this work with the Mineral Chemistry Research Unit, his capacity for leadership was clearly evident, as was his ability to recognise and develop the talents of others in his team. The significant contributions by Dr David Muir, who is named with him in nine of these, patent applications, exemplify this.

In his twenty-seven years of research and teaching, Jim made distinguished contributions as a visiting scientist to the University of Bergen, the University of California, Los Angeles, where Professor Saul Winstein played an important role in his development, the Technical University of Vienna and the National Institute for Metallurgy, Johannesburg.

His research awards were many and numbered among them the Rennie Medal, 1963, the HG Smith Medal, 1970, and Fellowship of the Royal Australian Chemical Institute, 1967. He was a Senior Fulbright Scholar in 1965, having previously held a Hackett Studentship of the University of Western Australia, 1957, a CSIRO Overseas Studentship, 1958, a Royal Norwegian Research Council Fellowship, 1960, and an ICI Fellowship, 1961. He was elected to Fellowship of the Australian Academy of Science in 1979.

Jim's service to the community was never limited by his own academic and research interests. He served on the Council of Wesley College and participated actively in science education at the secondary school level. He also worked on many State Government Advisory committees such as the Solar Energy Research Institute of Western Australia and the Western Australian Mining and Petroleum Research Institute. He served the Royal Australian Chemical Institute as Chairman of the Electrochemistry Division and, at the time of his death, was President of the Western Australian Branch.

One person provided an element of academic continuity throughout all of this. Sir Noel Bayliss was there at the start in 1951 as Professor of Chemistry at the University of Western Australia and remained committed as a member of the Senate of Murdoch University in 1982.

Sport played an important part in Jim's life and provided an understanding of the community outside academe. His participation in first grade cricket, golf, hockey, squash and table tennis in earlier years and his continued competitive interest in hockey and golf formed the basis of many friendships. In sport he was unorthodox and inventive, relished intense competition and showed a flair for leadership that made him a formidable cricket captain.

Few chemists have contributed so widely to theory, practice and application in a career which was short and still at its productive peak. Even fewer have combined this with such open friendship and concern for colleagues and students, thus providing others around him with the benefits of wisdom, knowledge, inspiration and good common sense.

All this was at a cost and for this we express our sympathy to Lesley and the boys, Ian, Geoffrey, Christopher and David.

DW WATTS, FELLOW and friend

September, 1982

