

## Introduction

The contributions of Peter Pauson and his research collaborators to the development of organo-transition metal chemistry have been very substantial. It is entirely fitting, therefore, that his formal retirement from academic life should be marked by the publication of this special issue of the *Journal of Organometallic Chemistry* to which he has been a regular contributor over the years and member of the Editorial Board since its inception in 1963.

Pauson's name will always be associated with the discovery of dicyclopentadienyliron, for which the name ferrocene was later suggested by Woodward and Whiting. Although this compound was apparently first prepared in 1948 (see letter in *Chemistry in Britain*, 2 (1966) 405), it was the independent reports by Kealy and Pauson in *Nature* (1951) and Miller, Tebboth and Tremaine in the *Journal of the Chemical Society* (1952) that caught the immediate and widespread attention of chemists. The research activity that these reports engendered quickly gained momentum and diversity, and study of the chemistry of organo-transition metal complexes continues to flourish four decades later.

Peter was born in Bamberg, Germany, but he received most of his education in the UK, culminating in the award in 1949 of a Ph.D. from the University of Sheffield where he had worked on purpurogallin chemistry in R.D. Haworth's research group. There then followed a two-year period at Duquesne University, Pittsburgh, where an unsuccessful attempt to synthesise dihydrofulvalene led to the isolation of "a new type of organo-iron compound", and research fellowships at Chicago and Harvard before he returned in 1953 to Sheffield to take up a lecturing post. He made his final move to Glasgow in 1959 when he was appointed to the Freeland Chair of Chemistry at the Royal College of Science and Technology which, in 1964, became the University of Strathclyde.

The work of the Pauson research group has focused particularly on synthetic and mechanistic aspects of organo-transition metal chemistry. Early work was concerned with development of the organic chemistry of ferrocene and other metallocenes, cyclopentadienylmetal carbonyls, butadienetricarbonyliron, and cycloheptatriene and tropylium complexes of the chromium group metals. This work was later extended and broadened to encompass studies of the chemistry of a very wide range of hydrocarbon-metal complexes. Highlights include the elucidation of substituent directing effects in substitution and addition reactions of ferrocene, arenemetal complexes and tricarbonyl(tropylium)chromium derivatives, the first syntheses of  $\pi$ -pyrrolyl- and  $\pi$ -indolyl-metal complexes and investigations of the properties of these systems, studies of rearrangements of hydrocarbon ligands, and the discovery and development of a new, widely applicable synthetic route to cyclopentenone derivatives in a single step from an alkyne via its hexacarbonyldicobalt complex, an alkene, and carbon monoxide present as a ligand in the complex (the Khand reaction). These researches have been reported in some 200 papers and review

articles; a textbook on "Organometallic Chemistry", published by Arnold, appeared in 1967.

Although organometallic chemistry has been Peter's main research preoccupation, he has from time to time pursued other chemical interests, notably in photochemistry and free-radical reactions, with occasional forays into organic synthesis and natural-product chemistry.

Over the years, Peter has played an active rôle in the affairs of the Royal Society of Chemistry and the Royal Society of Edinburgh, as a Fellow of these Societies, and he has received numerous awards dating from the Tilden Lectureship of the Chemical Society in 1959 to, most recently, the Makdougall-Brisbane Prize of the Royal Society of Edinburgh, for his major contributions to organometallic chemistry, and a Leverhulme Emeritus Fellowship.

Those of us who have had the good fortune to work with Peter as an academic colleague, research assistant, or postgraduate student, will testify to his inspiring leadership, unfailing courtesy and good humour, and practical concern for the well-being and career progression of his more junior associates.

In this Special Issue of the *Journal of Organometallic Chemistry*, members of the international community of organometallic chemists join in wishing him a long and happy retirement which, no doubt, will allow him more time to indulge his interests in the arts and outdoor pursuits. We may suspect, however, that his retirement from chemistry will be more perceived than actual for some time to come.

*Faculty of Science and Technology  
University of Ulster  
Coleraine  
Co. Londonderry, BT52 1SA  
Northern Ireland*

**William E. Watts**