



Preface

This issue of Catalysis Today has been assembled to mark the formal retirement of professor Julian Ross. It is based on selected papers from the proceedings of an international symposium entitled 'Catalysis: Art to Science' which was held in his honour at the University of Limerick on 3rd September 2007. The papers cover a wide range of topics, from methane activation to the challenging new theme of biomass conversion, these reflecting the wide range of Julian's research interests during the last 40 years.

A native of Northern Ireland, Julian Ross obtained his BSc and PhD degrees from the Queen's University of Belfast. Julian's PhD, carried out under the supervision of Wyn Roberts and Charles Kemball, was concerned with the chemisorption of H_2S and simple hydrocarbons on evaporated metal films. On completion of his PhD in 1966, Julian moved to the University of Bradford, UK, where he worked for 16 years, first as Research Assistant and then as Lecturer and finally as Senior Lecturer in Physical Chemistry. During his time in Bradford, he built up a strong research group with various activities in applied catalysis, particularly on catalysts for steam reforming and methanation, and he developed strong ties with a number of industrial research organizations in both the UK and abroad. In 1982, he was appointed as professor of Catalytic Processes and Materials at the University of Twente, The Netherlands. During his time at Twente, he became involved in a number of European Union funded research projects and collaborated with a wide range of scientists from industrial and academic laboratories throughout Europe. In 1991, Julian returned to Ireland, to a position at the University of Limerick as professor of Industrial Chemistry, and worked there until his formal retirement in September 2006. During his time in Limerick, he served as Head of the Department of Chemical and Life Sciences and then as Dean of College of Science. During this period as administrator, Julian maintained a strong catalytic research activity while also getting deeply involved in the promotion of science and technology among secondary school children.

Julian's research interests have ranged from fundamental surface chemistry and structural studies of catalyst materials to reaction kinetics and process applications of catalysis. He has authored or co-authored approximately 200 research papers and reviews and a number of patents and has delivered a large number of presentations at scientific meetings world-wide, these including many plenary and keynote lectures. His expertise in the development of catalysts for an assortment of important reactions is widely recognised, these including methane activation (reforming, coupling, CO_2 reforming and partial oxidation), methanation, oxidative dehydrogenation and selective oxidation of paraffins, selective reduction of NO_x , trapping of NO_x and SO_x , water-gas shift, and biomass conversion. His work on catalytic materials has also included studies of coprecipitated Ni-alumina catalysts and their stabilization and promotion (e.g. by lanthana), the use of niobia and zirconia as catalytic materials, membrane catalysis and high throughput testing of catalysts. Julian has supervised some 50 PhD candidates, as well as

a large number of M.Sc. students and post-doctoral fellows from all over the world.

Julian Ross has also been very active in the international catalysis community. He has been the Editor in Chief of Catalysis Today since its inception in 1987 and was the Editor of the News Brief section of Applied Catalysis between 1981 and 2003. He has been a member of the organization committees of many international symposia, including a series of international workshops on methane activation, on membrane catalysis and on the use of niobia in catalysis. He was the principal organizer of Europacat V held in Limerick in 2001, a meeting which attracted some 1100 catalytic scientists. He was the Chairman of the Council of Scientists of INTAS (International Association for the promotion of co-operation with scientists from the New Independent States of the former Soviet Union) from 2003 to 2006. He has also for many years represented Ireland on the Council of the European Federation of Catalysis Society (EFCATS). He is currently a member of the Executive Committee of ACENET, an ERA-net in Applied Catalysis. He holds two honorary chairs in China, one at the University of Tianjin and the other in the Eco-Environmental Research Centre of the Chinese Academy of Sciences (Beijing) and is a member of the International Advisory Board of the State Key Laboratory of Catalysis of Dalian Institute of Chemical Physics, Dalian, China. He is a member of the Irish Research Council for Science, Engineering and Technology (IRCSET). He was elected as a Member of the Royal Irish Academy (MRIA) in 2001 and served as its Treasurer from 2006 to 2008.

Despite his official retirement, Julian Ross is still actively engaged in many national and international activities, contributing to the structural development in science and technology, promoting education in science and engineering subjects and being actively involved, as "Research Professor", in new research initiatives, particularly those involving the production of chemicals from biomass.

The editors of this issue appreciate that so many of his former colleagues, students and coworkers, including his former supervisor in Belfast, professor Wyn Roberts, contributed to this issue. On behalf of the colleagues, postdoctoral and visiting scholars, and students that had the opportunity to work with Julian Ross, we are honoured to dedicate this special issue of Catalysis Today to mark his achievements in heterogeneous catalysis. We wish him all the best for his retirement and look forward to hearing the results of his new research activities.

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