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James Moir (1874-1929)

Chemist in South Africa

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About the author



Peter Loyson matriculated in Belgium in classical languages in 1965 and moved with his family to South Africa. In Port Elizabeth he was employed by General Motors, where he worked in the Chemistry Laboratories as a chemical technician. Whilst employed there for 7 years, he studied part-time at the PE College for Advanced Technical Education for the CTD Diploma (Chemical Technician's Diploma) after which he completed his BSc Degree through UNISA, majoring in Chemistry and Physics.

Further qualifications followed at the then University of Port Elizabeth ending up with a Doctorate in Chemistry in 1980, whilst lecturing physical and analytical chemistry part-time at the PE Technikon in the Pharmacy and Applied Science Departments. He became Head of Chemistry in 1980, a position he held for 15 years, after which he was appointed Professor in Chemistry. After the merging of the PE Technikon with the University of Port Elizabeth (UPE) he became Professor of Analytical and Physical Chemistry at the newly established Nelson Mandela Metropolitan University. He lectured electroanalytical chemistry, kinetics, thermodynamics and an introduction to chemical engineering. His main research focus was organic electrochemical synthesis and chemical education. He retired in 2011, when he was awarded the South African Chemical Institutes' prestigious Chemical Education Medal.

Peter Loyson has always been interested in history. In 2008 he was instrumental in founding the Ancient History Society of Port Elizabeth, a Society which has grown tremendously over the years. He has a strong interest in the history of chemistry and Science in general and has given talks on Chemistry in Ancient Egypt, Science and Technology in Ancient China, A tribute to the Ancient Greeks, Ancient Greek Mathematics, Ancient Roman Engineering, The Golden Age of Arabic Science, Ancient Timekeeping and others.

This book follows his investigations into the work of James Moir, Government Analyst, and a noted figure in the South African Chemistry community.

Foreword

James Moir arrived in South Africa from Scotland in 1902, where he had graduated with a D.Sc. from the University of Aberdeen. He became Government Analyst at the Government Chemical Laboratories in Johannesburg. He was very involved with the gold mining industry and studied the extraction of gold, using the cyanide process. He tried to minimize the amount of cyanide to the environment and did a number of experiments to do so.

He called himself “a chemical investigator” and delved into any branch of chemistry. He was truly an outstanding “all-round chemist”. Although mainly an organic chemist, the nature of his work on the mines forced him into chemical analysis and inorganic chemistry. He made valuable contributions to the development of atomic theory and chemical bonding. He was an outstanding spectroscopist and used this knowledge in explaining the colour of organic compounds, which was a massive undertaking, as he synthesised and examined hundreds of new compounds. He also studied the spectra of inorganic ions and even the Fraunhofer lines, where he put forward mathematical expressions to predict the line position in the spectrum. He also made valuable contributions to mine air analysis, including dust analysis.

This work contains a collection and evaluation of the output of James Moir’s chemical activities in all the various fields he was involved in, as gleaned from presentations in official Journals of the South African Chemical Institute.

Although James Moir is well-known in the South African chemical community, it is believed that outside the country, he is generally un-known. It is hoped that through this work, he will receive the international respect he fully deserves.

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A word of thanks ...

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Peter Loyson