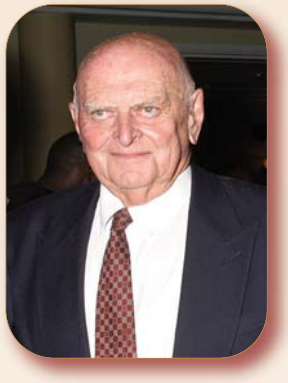
# A tribute to Prof. Robinson from his daughter



I write this to honour the life and work of my Dad, Dr R.E. Robinson, who passed away on 21 January 2016. I was privy to the last words that he submitted to the Journal, which was his letter to John Freer, agreeing with the exciting possibilities of a hydrogen age and its potential as a key factor in escalating the viability of the platinum industry in South Africa and prosperity for the nation. I believe the readers of his past Journal Comments may recognize in his response his enigmatic allusion to previously published ideas. The need for efficient processing methods (Platinum in the 21st Century, August 2015) and the possibility of prosperous and productive multidisciplinary communities (Black Swans *versus* White Swans, January 2013, Sustainability: Environmental, Economic, and Social, March 2015).

In his September 2015 unpublished writings he foresaw the declining demand for commodities, the closure and sale of mines, and predicted the predicament facing the industry today. But with optimism he highlighted a few key areas to temper the gloom. Foremost among these was his recognition of the rising role of the platinum fuel cell, which he envisaged coupled with a bipolar electrolysis cell to provide the hydrogen. Together with a small voltage input , these cells would cycle through, one to the other, creating hydrogen fuelled energy and producing a wide variety of valuable by-products, not least of which is water. He had written before on use of this water for agriculture through hydroponic fertigation for production of biomass with enormous potential for food, biofuel, and methane production. To provide an economical source of platinum for the fuel cells, Dad suggests the use of hydrometallurgical 'Kell' recovery processes and new mining techniques to reduce costs and increase yield; he also recognized that new innovations in this field warrant research through a suite of possibilities, sufficient to employ dozens of new graduates. Research, he anticipated, could be funded by improvements in materials processes and sales of valuable by-products, products derived efficiently from the integration of systems. His hopes were that within the communities of South Africa, led by the mining and agriculture industries, graduates would mentor, teach and motivate youngsters, fostering a cycle of enquiry, enthusiasm, and curiosity.

I believe it was his desire to foster curiosity that led him to write the final words of his letter: the ambiguous reference to a number of platinum-related projects to be defined and evaluated. When I challenged Dad to be more specific for the reader, he confirmed that the ambiguity was intentional. He hoped to provoke curiosity in the reader, to challenge you to question, to debate, to comment, and to critique. His hope was that the next generation of graduates will, through shared education, innovation, and research, create a nation where communities can flourish, and South Africans can prosper.

**Jennifer Robinson**