

# Preface

The AMI Light Metals Conference 2014, hosted by the Council for Scientific and Industrial Research (CSIR), South Africa, took place from October 15<sup>th</sup> to 17<sup>th</sup> 2014 at Kwa Maritane Bush Lodge, Pilanesberg National Park, South Africa.

The AMI Light Metals Conference 2014 was intended to provide a forum for researchers and industry players to present the progress made over the past few years on the research and development of technologies for industrial applications of light metals. Papers dealt with research and development and technologies in areas such as primary metal production, metal powder processing, advanced casting processes, joining, high-performance machining, forming and forging. Supporting competences, such as physical metallurgy, simulation and modelling, mechanical and physical property characterisation and commercialisation were also addressed.

The objective of the Advanced Metals Initiative (AMI) is to increase the value-addition of South African mineral resources in a sustainable manner through industry relevant research and development, technology transfer, and ultimately, commercialisation of advanced materials. The four networks of the AMI are Light Metals (titanium, aluminium & magnesium), Precious Metals (gold & the platinum group metals (PGMs)), Nuclear Materials (zirconium, hafnium, tantalum, niobium & monazite) and Ferrous & Base Metals. Papers from students involved in all four networks of the AMI were also included. Students were encouraged to make the most of the opportunity to share their work with their peers and to grow their presentation skills during a Student Seminar on 15 October 2014.

To ensure the academic integrity of research conducted in the AMI, the submitted papers have been individually peer reviewed. We want to thank both the reviewers and the authors for their valuable work and effort to achieve the best possible results.

H. Möller

Chairman of the AMI Light Metals Conference 2014

# AMI Light Metals Conference 2014

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Heinrich Möller

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