

Division Focus: The Light Metals Division

The Light Metals Division (LMD) was created in 2000 as one of the IOM3 Technical Communities and is one of their seven Materials Divisions. The LMD is evolving, in response to the changing shape of the UK light metals industry, away from primary production towards a more application and user-based community. Our mission has recently been redefined: *to provide a unique UK forum which ensures a vibrant and innovative light metals technology sector by bringing together specialists from academia, industry and government to share knowledge and support education in light metals with a view to maximising their sustainability, application opportunities and use in manufacturing.*

There have been major changes in the UK industrial landscape since the LMD was first formed in 2000, with primary metal and alloy production and downstream processing activities declining significantly, particularly for aluminium. Today, the remaining light metal producers and processors tend to be multinational conglomerates, as are most of the major users. Conversely, over the same period, the demand for light metals has increased, particularly from the automotive and aerospace sectors, with local sourcing and a short supply chain becoming a major strategic requirement. To support these aims, the LMD has developed a framework for a strong UK-based network to help shape light metals research in the UK. Regular meetings and workshops provide a forum to bring industrial and academic stakeholders together, thus ensuring that advances in light metals research and development are aligned with manufacturing challenges, particularly from the transport sector. Greater collaboration between universities and industry assists the development of enabling technologies to open up new applications for light metals and also ensures that the challenges of major industrial users are addressed. The LMD works closely with other IOM3 groups, such as the Automotive Applications Division and the Casting and Solidification Division, and maintains a strategic plan for light metals R&D linked with current and perceived future industry needs. This strategic plan is continuously developed with regular input from both EPSRC and Innovate UK and other key academic and industrial groups. Over the past few years, the UK government has supported a series of R&D activities in light metals through the EPSRC, Innovate UK and HEFCE. The LMD works closely with the EPSRC Centre for Innovative Manufacturing in Liquid Metal Engineering (LiME) and the EPSRC Programme, Light Alloys Towards Environmentally Sustainable Transport: 2nd Generation (LATEST2).

From a wider European perspective many recent national studies have all concluded that metallurgy, as a fundamental and applied research topic, is suffering from low levels of public investment and student enrolment. This is particularly the case for light metals research and development in the UK and more must be done to promote interest in this strategic field, both in the UK and in Europe. Metallic products contribute a staggering 1.3 trillion euros added value to EU economy each year and light metal alloys make a major contribution to this total. The LMD is committed to increasing and coordinating light metal R&D across the entire value chain from alloy design, processing, optimisation, scale-up, deployment and end-of-life recovery and recycling to enable the UK manufacturing economy to continue to benefit from innovation in light alloy metallurgy.