

# EUROMAT 2021

EUROPEAN CONGRESS AND EXHIBITION  
ON ADVANCED MATERIALS AND PROCESSES

WWW.EUROMAT2021.FEMS.EU

12. - 16. SEPTEMBER 2021

GRAZ, AUSTRIA

**ASMET**  
THE AUSTRIAN SOCIETY FOR  
METALLURGY AND MATERIALS

**FEMS** 30  
FEDERATION OF EUROPEAN  
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## Area B: Structural Materials

### Symposium B2:

<b>Title: Light Weight Metals</b>		
<b>Organizer</b>	<b>Institution</b>	<b>Contact email</b>
Joaquin Rams	Rey Juan Carlos University	joaquin.rams@urjc.es
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<b>Abstract</b>		
<p>Light weight metals are essential in our everyday live and for the industry, and are also a basic element in the future for improving our lives, our planet and are a key enabling factor for achieving the Sustainable Development Goals (SDG) proposed by UN.</p> <p>This symposium is planned as a meeting point for professionals and researchers of the light weight materials community, where they can share their knowledge, show their advances and discuss the exciting present and future of materials that include aluminum, magnesium and titanium alloys, as well as light weight metal matrix composites, and high-entropy alloys.</p> <p>Contributions related with novel materials or processing techniques such as additive manufacturing or nanostructuring, and postprocessing methods such as heat treatment, surface treatment or coatings are welcomed. Also, fundamental contributions, as well as theoretical, applied research, new technologies and recycling are encouraged.</p> <p>With the expected contributions, the symposium will be an excellent opportunity for knowledge exchange and networking for all the participants.</p> <p>This symposium will cover, but is not limited to, the following range of topics:</p> <ol style="list-style-type: none"><li>1.- Alloy design including aluminum, magnesium and titanium alloys and high-entropy alloys.</li><li>2.- Light weight metal materials including composites, cellular materials and foams.</li><li>3.- Advanced processing and nanostructuring (ECAP, mechanical milling, ...).</li><li>4.- Additive manufacturing of light metals: direct and indirect AM.</li></ol>		

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- 5.- Performance evaluation of light weight metals in different applications, environments and extreme conditions: mechanical, thermal, electrical, biocompatibility, wear and corrosion, among other.
- 6.- Novel testing and characterization of light alloys.
- 7.- Modeling and simulation.
- 8.- Next generation of materials based on light alloys.
- 9.- Improvements in sustainability, recycling and live cycle of light weight metals.
- 10.- Influence of light weight metals on the achievement of the UN Sustainable Development Goals.