

EUROMAT 2021

EUROPEAN CONGRESS AND EXHIBITION
ON ADVANCED MATERIALS AND PROCESSES

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Area E Energy and Environment

SYMPOSIUM: E1

Title: Advanced Materials for Transport Applications VI		
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Abstract		
<p>Transport applications remain a major driving force specifically for structural material development, where weight reduction must be achieved in parallel to the fulfillment of several other requirements such as crashworthiness, sustainability/recyclability etc. The advent of trends like E-mobility may change, but does not negate these boundary conditions. The planned symposium will highlight lightweight design as common denominator and focus on the vehicle, not on infrastructure – the term vehicle including the road, rail, air, space and maritime sector. Beyond this general scope, specific topics are highlighted to provide focal points for contributions. Session topics will be</p> <ul style="list-style-type: none">• Additive Manufacturing for Transport Applications• Advanced Casting Technology for Transport Applications		

- Advanced lightweight Composite Materials for Transport Applications
- Hybrid Engineering Materials & Structures and Multi-Material Design
- Intelligent Materials, Structures and Systems for Condition and Structural Health Monitoring (SHM) and Product Life Cycle Management (PLM)
- Simulation, Modeling, Optimization including AI and Big Data applications for Process Discovery, Characterisation, Monitoring and Control.

For all of these, specific session flyers detailing the content will be prepared and distributed. Further topics may emerge from the submissions received.

All symposium organizers have significant experience with Euromat, and all can rely on a broad network of contacts in the areas covered by the symposium, thus ensuring a significant number of contributions. To motivate further contributors, the organizers plan to directly address EU funded projects from the symposium's thematic areas and suggest Euromat to them as ideal platform for publication of their results, discussion, and cross-project exchange. For this, we reserve the possibility of creating a special session, potentially with direct EU support.

Contributors will be offered the possibility of submitting their work to a dedicated special issue of a high-ranking scientific journal (still to be selected). In the past, such special issues have been offered with Adv. Eng. Materials (Euromat 2009 & 2017), Steel Res. Int. and J. of Intelligent Mat. Systems and Structures (Euromat 2011) and Materials & Design (Euromat 2013) and Materials (Euromat 2017, Euromat 2019). Besides the aforementioned, a candidate for Euromat 2021 are Advanced Engineering Materials (Wiley-VCH, Impact Factor 2019: 3.217), Journal of Materials Processing Technology (Elsevier, Impact Factor 2019: 4.669), Journal of Materials Science & Technology (Elsevier, Impact Factor 2019: 6.155) or Materials & Design (Elsevier, Impact Factor 2019: 6.289).