

Special Issue

New Advances in Light Metal Alloys for Additive Manufacturing

Message from the Guest Editors

Additive manufacturing is unlocking design and geometrical constraints typical of traditional manufacturing, leveraging the production of complex and lightweight structures. This evolution involves a shift in the way in which a component is designed to the idea of using the smallest amount of material, and to optimize it to be built in a layer-upon-layer way. When it comes to metal, the particular processing conditions taking place inside additive manufacturing machines give rise to peculiar microstructures and unique mechanical properties. Light alloys are of particular interest for additive manufacturing and represent some of the largest amounts of metallic materials processed by additive layer manufacturing (Ti-6Al-4V being the most widely 3D printed alloy in the world to date), with the exception of magnesium, which is slowly but remarkably taking its first steps in this field of research.

- additive manufacturing
- light alloys
- mechanical properties
- microstructural characterization
- process parameters
- powder metallurgy
- corrosion properties and surface finishing
- modeling and simulation

Guest Editors

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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