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Investigation on microstructure and properties of Mg-Li-Al alloys

Mg-Li based alloys are the lightest metallic structural materials and have been attracted more and more attentions in the field of aerospace, spaceflight and automobile industry. The Mg-Li-Al alloys are prepared, and the duplex phases of α -Mg of hcp crystal structure and β -Li of bcc crystal structure are obtained. The influences of different alloying elements such as Sr, Zn, and Y on the microstructure and mechanical properties of Mg-Li-Al alloys are investigated. The effect of extrusion process on the microstructure and mechanical properties is also studied, the deformation behavior and dynamic recrystallization mechanism during the hot extrusion process is discussed.

Speaker Biography

Xiaodong Peng graduated from the department of mechanical engineering in Chongqing University, China and received his PhD in materials science and engineering from Case Western Reserve University, USA. He is the professor of Chongqing University, China, and has served as the associate director of National Engineering Research Center for Magnesium Alloys and associate editor of the Journal of Magnesium and Alloys. He has about 200 publications and over 20 patents.

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