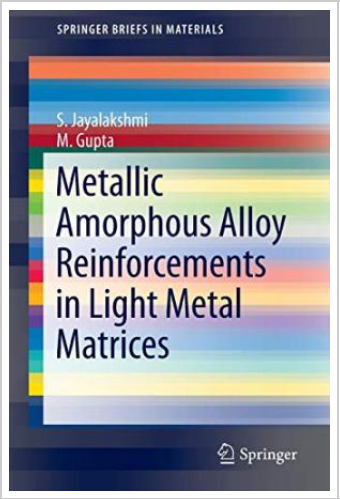

Metallic Amorphous Alloy Reinforcements in Light Metal Matrices

By S. Jayalakshmi

Springer-Verlag Gmbh Mrz 2015, 2015. Taschenbuch. Condition: Neu. Neuware - This book presents cutting-edge research on the design and development of novel, advanced high-strength, light-weight materials via the incorporation of novel reinforcements, namely, metallic amorphous alloys/bulk metallic glasses (BMG), in light metal matrix composites (LMMCs) based on Al and Mg. The book begins with an introduction to conventional ceramic reinforced light metal matrix composites, along with the major drawbacks which limit their application. Metallic amorphous alloys/Bulk Metallic Glasses (BMG) are new class of metallic materials that are distinctly differently from conventional metals/alloys in terms of their structure and thermal behavior, and exhibit extremely high strength (1 to 2 GPa) and large elastic strain limit (1 to 2%). Given these unique properties, upon their incorporation into Al/Mg-matrices, they provide superior interfacial properties, i.e. high degree of compatibility with the matrix due to their metallic nature when compared to conventional ceramic reinforcements, and thereby significantly enhance the mechanical performance of LMMCs. Amorphous/BMG reinforced LMMCs is an emerging research field and the existing literature is meager. This book discusses the various processing methods that would be suitable for these novel materials. A comparison of mechanical properties and strengthening mechanisms of amorphous/BMG reinforced composites...

Reviews

Absolutely among the best publication I have at any time go through. It is definitely basic but shocks from the 50 % of the book. I discovered this book from my i and dad advised this publication to find out.

-- ***Solon Pacocha***

A top quality pdf and also the font employed was intriguing to read. It is one of the most awesome publication we have read. I am delighted to tell you that here is the finest book we have go through in my personal life and can be he very best pdf for at any time.

-- ***Webster Kub***