

TMS 2015

144th Annual Meeting & Exhibition

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Orlando, Florida, USA

Connecting the global minerals, metals, and materials community.



Plan Now to Attend:

Bulk Metallic Glasses XII

In the last decade, new approaches to fabricating metallic glasses [i.e., by utilizing unique combinations of elements to form metallic-glass alloys] have resulted in the required cooling rate dropping from 10^5 C/s to as low as 1 C/s, and the specimen size increasing from 0.05 mm to as large as 80 mm. Because of the large sizes possible with this exciting technology, the metallic glasses are called Bulk Metallic Glasses (BMGs).

Mechanical behavior of BMGs is among the new, exciting fields of research that are fully illustrating their advantages over crystalline alloys. Generally, BMGs have higher fracture strengths, fracture toughnesses, and elasticities than their crystalline counterparts. There is great interest in BMGs for use in biomedical, structural, and mechanical applications.

Some of the areas to be explored include:

- Material fabrication and processing
- Nanocrystalline materials and composites based on BMGs
- Mechanical behavior
- Shear band formation, fatigue, deformation, and fracture mechanisms
- Corrosion, physical, magnetic, electric, thermal, and biomedical behavior
- Theoretical modeling and simulation
- Industrial applications

Sponsored by:

- TMS Structural Materials Division
- Mechanical Behavior of Materials Committee

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**For more information on how
to participate, visit:**

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Questions? Contact programming@tms.org