Combinatorial process for Bulk Metallic Glasses

OCR Number: OCR 6186

Rapid Development of BMG Alloys with High Formability

High-Throughput Characterization

\[ F \propto \frac{h}{S} \]

Compositional Library
- Gas Releasing Agents
- (GRAs)
- (GRAs)
- Si
- Steel

Al: 10-30%
Cu: 30-60%
Zr: 30-55%
High-Throughput Characterization of Formability

\[ F \propto \frac{h}{S} \]

A. P1 \hspace{2cm} Si Mold \hspace{2cm} P2

B. BMG

C. Si Mold

MG Film

\~3000 compositions
Best formability composition here: \( \text{Mg}_{69}\text{Cu}_{21}\text{Y}_{10} \)

Best formability composition reported: \( \text{Mg}_{65}\text{Cu}_{25}\text{Y}_{10} \)

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