

Adel El-Shabasy's Research Interests

The effects of chemistry changes on the flow and fracture behavior of Fe-based amorphous ribbons are being determined. Tension, toughness, and flex bending fatigue studies are being performed in order to document the effects of chemistry changes on these mechanical properties. Subsequent work will investigate the effects of lamination on the mechanical behavior of these Fe-based amorphous ribbons. The work is being supported by a US-Egypt NSF Collaborative Grant. Other ongoing work is investigating the effects of changes in test temperature and stress concentration on the bending fatigue behavior of aluminum alloys at temperatures ranging from room temperature to 500F. This is being conducted on both conventional aluminum alloys as well as those that have seen significant service applications.

Conference Posters:

[Effect of composition on mechanical properties of Fe based amorphous ribbon](#)

[Fracture and Fatigue of Fe based metallic glass ribbon](#)

[Toughness of Nano- Crystalline Aluminium Alloy Composites](#)

[Microstructure and Mechanical Properties Evolution of Long-Time Serviced 5xxx Aluminium Alloys](#)

Journal Papers:

[Effects of Notch radius and Test Temperature on the Toughness of Nano-Crystalline Aluminium Alloy Composites](#)