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Fatigue and Fracture Behavior of Bulk Metallic Glasses and Their Composites

Haoling Jia^{1,a}, Gongyao Wang^{1,a}, Shuying Chen¹, Yanfei Gao^{1,2,*}, Weidong Li^{1,*},
and Peter K. Liaw^{1,*}

¹Department of Materials Science and Engineering, The University of Tennessee,
Knoxville, TN 37996, USA.

²Materials Science and Technology Division, Oak Ridge National Laboratory,
Oak Ridge, TN 37831, USA

Abstract

A fundamental understanding of the fatigue and fracture behavior of bulk metallic glasses (BMGs) and their composites is of critical significance for designing new BMG systems and developing new manufacturing and processing techniques so as to broaden the scope of applications of BMGs and their composites. However, the fatigue and fracture studies on BMGs are limited so far, compared to other mechanical properties. The present work reviews the fatigue and fracture behavior of BMGs and their composites, as well as that of metallic-glass films, ribbons, and wires. The grand challenge for the fatigue and fracture performance of BMGs is:

^a These authors contributed equally to this work.

* Corresponding authors. Tel.: +1 865 974 6356.

E-mails: ygao7@utk.edu (Y.F. Gao), lei432378yu@gmail.com (W.D. Li), pliaw@utk.edu (P.K. Liaw).

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