Toward Intrinsic Damage Resistance and Ductility in Oxide Glasses

Vittorio Gottardi Award Lecture

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Publication date:
2019

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Oxide glasses are among the most important engineering and functional material families owing to their unique features, such as tailorable physical properties. However, at the same time their brittleness has been their main drawback, which severely restricts many applications. Despite much progress, a breakthrough in developing oxide glasses with intrinsic damage resistance and ductility still needs to be made. In this talk, we discuss recent advances and challenges in designing new damage resistant, and potentially tough, oxide glass compositions.