**Fracture toughness, fracture energy and slow crack growth of glass as investigated by**

**the Single-Edge Precracked Beam (SEPB) and Chevron-Notched Beam (CNB)**

**methods**

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**Abstract:** We show that the Single-Edge Precracked Beam (SEPB) test is not only suitable to the determination of the fracture toughness (*KIc*) of glass, but also offers a unique opportunity to assess the slow crack growth behavior in a single experiment lasting for few minutes. Besides, we found that it is possible to get either a stable or an unstable final fracture regime (pre-cracked specimen) depending on the testing parameters, and that the unstable case is preferable for the estimation of *KIc*. The "pop-in" precrack was found mostly to close completely once the load was suppressed on the bridge-flexure device. This led to a reopening event on the loading curves. It is noteworthy that all these original observations were made possible thanks to the design of very stiff testing apparatus (6.7 MN.m−1) allowing for a cross-head speed as small as 0.01 μm.s−1. Results obtained on four grades of commercially available glasses are compared to those stemming from Vickers indentation cracking and chevron notched experiments.