
# Dynamic crack-interface interactions in SGP laminated glass: an experimental investigation

Chengliang Xu, Ye Yuan, Chunlei Zhao, P.J. Tan, Xiaoqing Xu, Yibing Li

PII: S0167-6636(17)30767-6
DOI: 10.1016/j.mechmat.2018.04.006
Reference: MECMAT 2866

To appear in: *Mechanics of Materials*

Received date: 6 November 2017
Revised date: 14 March 2018
Accepted date: 5 April 2018

Please cite this article as: Chengliang Xu, Ye Yuan, Chunlei Zhao, P.J. Tan, Xiaoqing Xu, Yibing Li, Dynamic crack-interface interactions in SGP laminated glass: an experimental investigation, *Mechanics of Materials* (2018), doi: 10.1016/j.mechmat.2018.04.006

## Highlights

- Either crack arrest or branching damage mode may develop in single-edge notch bend test specimen of SGP laminated glass loaded in three point bending.
- There is a critical distance, between the interface and pre-crack tip, below which the propagating mode-I crack is arrested by the interface.
- The arrest time prior to branching reduces significantly with increasing impact kinetic energy.
- A maximum dynamic stress intensity factor criterion is shown to be capable of predicting whether branching damage mode would appear.