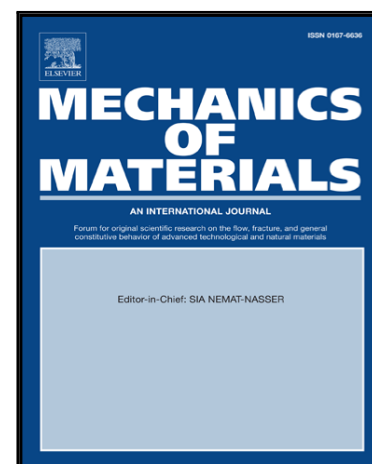


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Mechanical characterization of brittle materials using instrumented indentation with Knoop indenter

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Highlights

- Development of an original method to determine mechanical properties of brittle materials by using Knoop indenter.
- Anisotropic elastic recovery of Knoop impression is directly estimated from instrumented indentation data, which permit a convenient use.
- Results obtained by the Knoop indentation proposed method are in good agreement with those obtained by Vickers indentation.
- At similar loadings, Knoop indenter permits to avoid, or limit, the cracking, compared to Vickers indenter.
- Knoop indentation represents an interesting way to characterize the mechanical properties of bulks and thin films brittle materials.

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