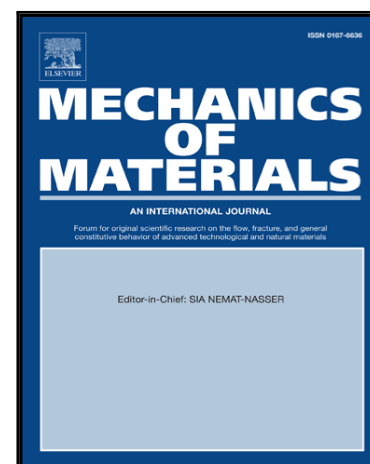


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Study on concavity-convexity transition of loading curve for spherical indentation

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## Highlights

- Concavity-convexity transition phenomenon of loading curve for spherical indentation was found.
- A cubic polynomial empirical model was proposed to accurately describe the loading curve and tangent slope curve.
- Hardening index is the only decisive parameter affecting the concavity-convexity transition phenomenon.

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