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Isotropic and anisotropic wrinkling of diamond-like carbon films on polydimethylsiloxane substrates

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ABSTRACT

We describe experimental results about the spontaneous wrinkling of diamond-like carbon films over the thickness range 2 nm–58 nm, grown on polydimethylsiloxane (PDMS) substrates with a 5 nm gold film deposited as adhesion layer. Using Atomic Force Microscopy data with suitable processing, we explore both isotropic and anisotropic wrinkling, the latter done by creating trench structures on PDMS substrates. We show new non-predictable results based on the known literature.

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