Analysis of nano-indentation experiments on thin carbon nitride films is complicated by the high elastic recovery and high unloading curvature observed with these materials. Methods of data analysis are compared, and a recent model by Cheng and Cheng [Surf. Coat. Technol. 133–134 (2000) 417], which uses the work done during indentation, is applied to carbon nitride films for the first time. This is found to give better estimates of hardness and modulus than the other methods.

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