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**Effect of nitrogen plasma afterglow on the (1000-1800) cm^{-1} band in FT-IR spectra
of amorphous carbon nitride thin films**

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Abstract

The aim of this paper is to develop the understanding of the mechanism which explain the formation of the (1000-1800) cm^{-1} band in FT-IR spectra of amorphous carbon nitride thin films prepared by laser ablation method.

The study results show that the bonds $\text{C}(\text{sp}^3)\text{-N}$ is have significant role in the formation of the (1000-1800) cm^{-1} band, and it is necessary to provide a minimum amount of these bonds to be able to contribute in breaking the symmetry of the sp^2 carbon bonds.

Key Words: Laser Deposition; Carbon nitride; X-ray photo- electron spectroscopy; FT-IR spectroscopy.

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