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Structural and Optical Characterization of Carbon Nitride Layers Deposited by Plasma Assisted Chemical Vapor Deposition at Various Conditions

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ABSTRACT

Amorphous hydrogenated carbon nitride layers, a-C:N:H, were fabricated by radio-frequency, 13.56 MHz, plasma assisted chemical vapor deposition (RF-PACVD) from gaseous CH₄ and N₂ diluted in argon. Five series of layers were deposited at various processing conditions. In the respective experiments one of technological parameters (pressure, radio frequency power, temperature, CH₄ or N₂ flow) varied while the other were kept on constant level. The optical and structural properties

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