

Study of Polymerisation with Electron Density Monitored

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Polymerisation in a radio frequency plasma of organic vapours has been studied. Localized measurements of electron density have been performed with a resonance probe. Radial and longitudinal profils of the electron density have been obtained. At a constant pressure, there is a linear relation between the growth rate of the polymer film and the electron density close to the substrate. This result verifies the relation we obtained between the growth rate and the mean electron density measured with a resonant cavity. The influence of the monomer pressure on the growth rate has been studied, the electron density being kept as a constant.

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