

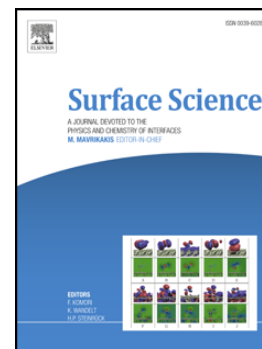
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Initial stages of organic film growth characterized by Thermal Desorption Spectroscopy

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Initial stages of organic film growth characterized by Thermal Desorption Spectroscopy

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Abstract

In the wake of the increasing importance of organic electronics, a more in-depth understanding of the early stages of organic film growth is indispensable. In this review a survey of several rod-like and plate-like organic molecules (p-quaterphenyl, p-sexiphenyl, hexaazatriphenylene-hexacarbonitrile (HATCN), rubicene, indigo) deposited on various application relevant substrates (gold, silver, mica, silicon dioxide) is given. The focus is particularly put on the application of thermal desorption spectroscopy to shed light on the kinetics and energetics of the molecule-substrate interaction. While each adsorption system reveals a manifold of features that are specific for the individual system, one can draw some general statements on the early stages of organic film formation from the available datasets. Among the important issues in this context is the formation of wetting layers and the dewetting as a function of the substrate surface conditions, organic film thickness and temperature.

Keywords: organic molecules, thin films, thermal desorption spectroscopy, wetting,

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