

# Adsorption behavior of hydrophobically modified polyelectrolytes onto amino- or methyl-terminated surfaces

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The adsorption of hydrophobically modified polyelectrolytes derived from poly(maleic anhydride-alt-styrene) (P(MA-alt-St)) containing in their side chain aryl-alkyl groups onto amino- or methyl-terminated silicon wafers was investigated. The effect of the spacer group, the chemical nature of the side chain, molecular weight of polyelectrolyte, and ionic strength of solution on the polyelectrolyte adsorbed amount was studied by null ellipsometry. The adsorbed amount of polyelectrolyte increased with increasing ionic strength, in agreement with the screening-enhanced adsorption regime, indicating that hydrophobic interactions with the surface play an important role in the adsorption process. At constant ionic strength, the adsorbed amount was slightly higher for polyelectrolytes with larger alkyl side chain and decreased with the hydrophobicity of aryl group. The adsorption behavior is discussed in terms of the side chain flexibility of the polymer. Characteristics of the adsorbed layer