

## Polypyrrole Thin Films Deposition on the Peptide Immobilized Surfaces

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The interfacial phenomenon between biomolecule and electrode is of keen interest in the bioelectronic science. In this study, the interaction between biomolecule of peptide and conducting polymer, polypyrrole (PPy) was studied. Polypyrrole thin films were deposited on the peptide-immobilized silicon wafer substrate via oxidative chemical polymerization. The growth of the PPy film on peptide-immobilized surface was monitored to understand the role of peptide in binding PPy film. Also, morphology and conductivity of PPy film were characterized. Due to the electrical interaction of the peptide to the PPy film, a thinner PPy film grew on the peptide-immobilized surface comparing to the PPy film prepared without peptide. Furthermore, PPy film on peptide-immobilized surface showed improved electrically conductivity. These results demonstrate that the peptide could control growth and conductivity of PPy film.