

## **Patterning of Proteins Fabricated by Microcontact Printing method for site-specific Immobilization and protein-protein interaction assay**

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### **Abstract**

The selective patterning of different fluorescent proteins such as EGFP (enhanced green fluorescent protein), ECFP (enhanced cyan fluorescent protein), DsRed (enhanced red fluorescent protein) and EYFP (enhanced yellow fluorescent protein) were fabricated by microcontact printing ( $\mu$ CP) techniques<sup>1-3</sup>. In this work, we patterned PHB (polyhydroxybutyric acid) layers on silicon wafer. PHB was chosen because of its utility in selective attachment of proteins which have PHB extracellular PHB depolymerase's substrate binding domain (SBD)<sup>4</sup>. Different fluorescence proteins were chosen as models and expressed as fusion proteins with SBD at their C-termini in *Escherichia coli*. The patterned fluorescent proteins were visualized with confocal microscope and successfully tested for protein-protein interaction assay subsequently. Atomic force microscope (AFM) analysis were carried out on the patterned layers to determine layer thickness and coverage.

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### **References**

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