

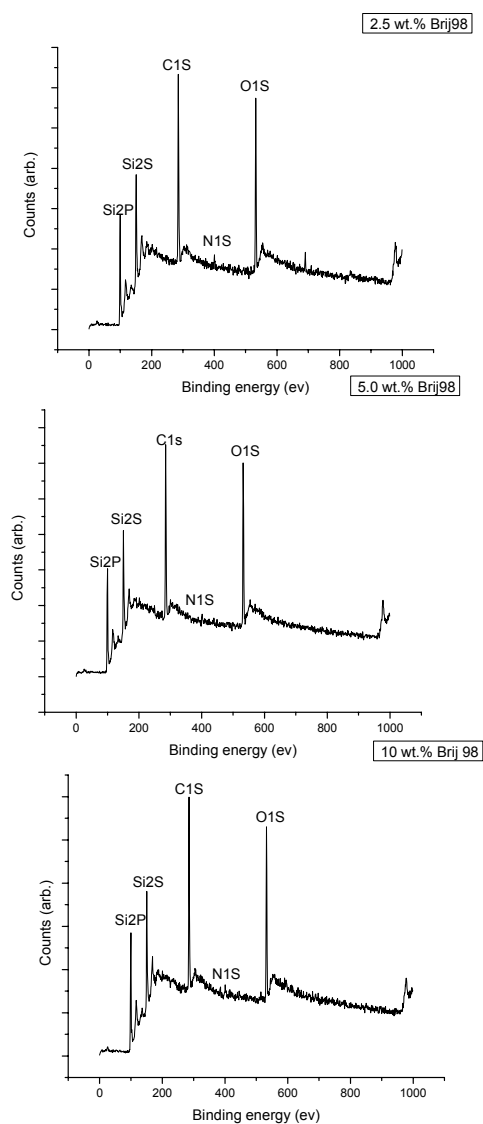
Supporting information for:

Directing Polyallylamine Adsorption on Microlens Array Patterned Silicon
for Microarray Fabrication

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Supporting information, Figure 1. XPS of hexadecyl monolayers on silicon treated with a solution of PAAM and Brij 98.

The following are derivations of the formulas used to calculate the yields of the reactions between PAAm and PDITC or Biotin NHS ester.

PAAm-PDITC	PAAm-Biotin-NHS ester
$Yield = \frac{\# \text{NinPAAmFunctionalized}}{\text{Total\#NinPAAm}} \times 100\%$ $Yield = \frac{\frac{1}{2} N_{PDITC}}{N_{PAAm}} \times 100\%$ $N_{PDITC} = S_{PDITC}$ $N_{TOT} = N_{PAAm} + N_{PDITC}$ $N_{PAA} = N_{TOT} - S_{PDITC}$ $Yield = \frac{\frac{1}{2} S_{PDITC}}{N_{TOT} - S_{PDITC}} \times 100\%$ $Yield = \frac{0.5}{\frac{N_{TOT}}{S_{PDITC}} - 1} \times 100\%$	$Yield = \frac{\# \text{NinPAAmFunctionalized}}{\text{Total\#NinPAAm}} \times 100\%$ $Yield = \frac{\frac{1}{2} N_{biotin}}{N_{PAAm}} \times 100\%$ $N_{biotin} = 2S_{biotin}$ $N_{TOT} = N_{PAAm} + N_{biotin}$ $N_{PAA} = N_{TOT} - 2S_{biotin}$ $Yield = \frac{S_{biotin}}{N_{TOT} - 2S_{biotin}} \times 100\%$ $Yield = \frac{1}{\frac{N_{TOT}}{S_{biotin}} - 2} \times 100\%$