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The ability to immobilize biomolecules at specific locations on the surface of solid supports is central to many biochip applications. This paper reports the rapid one-step photochemical surface patterning of biomolecules in thiol-ene microfluidic chips. Adjusting the stoichiometric ratio of “thiol” and “ene” monomers present in the microfluidic chip bulk material provides a simple and efficient way of tuning the chip’s surface chemistry. Here, thiol-ene chips displaying an excess of functional thiol groups at their surfaces are functionalized with biotin and streptavidin in a controlled fashion using photolithography. We also present quantitative data on the number of functional groups available for surface modification on thiol-ene substrates and their stability.

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