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Hydrophobic Interactions on a Protein-Polymer Functionalized Surface of Varying Hydrophilicity KRISTEN KELLER, PINAR AKCORA, Stevens Institute of Technology — We have developed a novel heterogeneous surface consisting of streptavidin and poly(methyl methacrylate) (PMMA) grafted to silicon substrates. Such a system has been fabricated using the ever-growing click chemistry approach. Functionalities found at the surface of the substrates are characterized through FTIR while the hydrophobic effects arising from the interactions between the grafted components of differing hydrophilicities are investigated through AFM. Adhesive properties of such a heterogeneous surface are calculated using data acquired from force-distance measurements. Furthermore, changes in these properties resulting from variations in streptavidin surface coverage and PMMA chain length are similarly studied.

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