Supporting Information for …

Monitoring and Mapping Imperfections in Silane-Based Self-Assembled Monolayers by Chemical Amplification**

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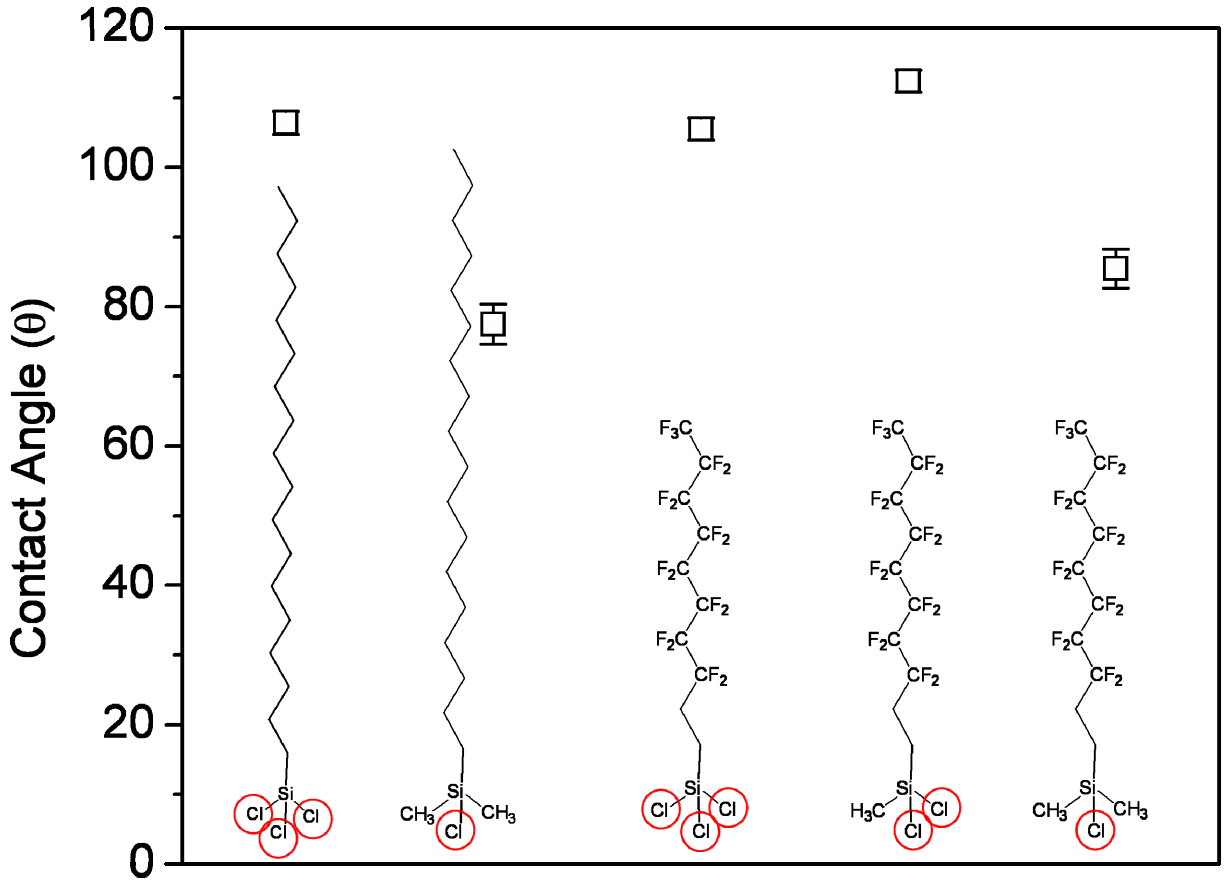

Figure S1. Water contact angle measurements for substrates of silicon oxide coated with silane-based SAMs. These monolayers were prepared using identical conditions as outlined in the manuscript. Plotted contact angles correspond to SAMs of the molecule depicted below each data point. Reactive groups on each silane molecule are circled in red. Error bas indicate a value of twice the standard deviation in contact angle averaged over 10 distinct measurements.

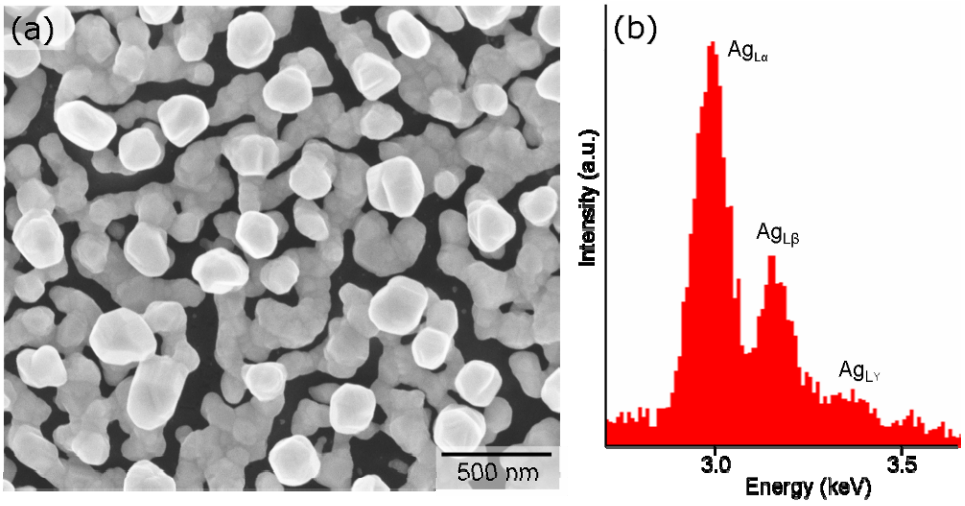

Figure S2. (a) SEM image and (b) integrated energy dispersive X-ray spectrum (integrated over 2 μm^2 for 100 s) for a silicon oxide coated substrate after exposure to a solution of 5 mM silver nitrate and 1.8 mM hydrofluoric acid. This demonstrates deposition of large silver aggregates over the substrate in the absence of a coating of silane-based SAMs.

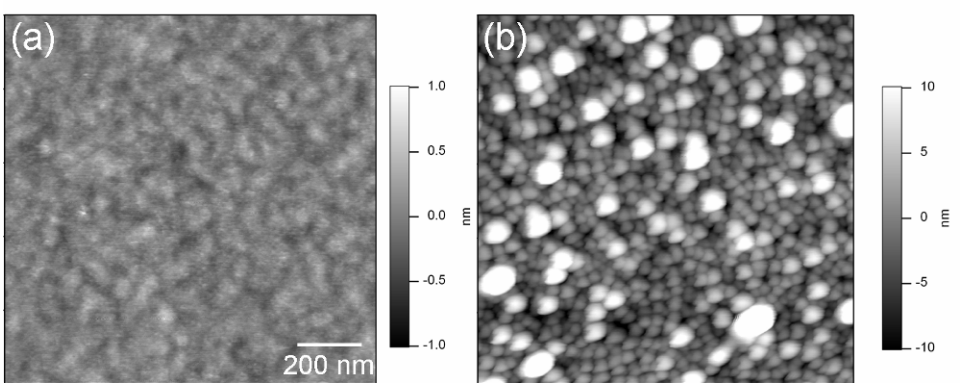

Figure S3. Representative AFM images of silicon substrates (coated with a native oxide) after immersion in (a) 1 mM aqueous solution of $AgNO_3$ for >5 min, and (b) 1 mM aqueous solution of $AgNO_3$ with 1.8 mM hydrofluoric acid for 5 min.