Supplemental Information for

Chemical Lift-Off Lithography of Metal and Semiconductor Surfaces

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Supplemental Methods

Atomic Force Microscopy

Patterned Ge surfaces after chemical lift-off lithography were imaged *via* atomic force microscopy using a Dimension Icon scanning probe microscope (Bruker, Billerica, MA). Surface topographies were measured using the PeakForce Quantitative Nanomechanical Property Mapping (PeakForce QNM) mode. ScanAsyst-Air cantilevers (Bruker, spring constant = 0.4 ± 0.1 N m^{-1}) were calibrated with a clean piece of silicon wafer before every measurement. A peak-force set-point of 400 pN and a scan rate of 1 Hz was maintained for all measurements.

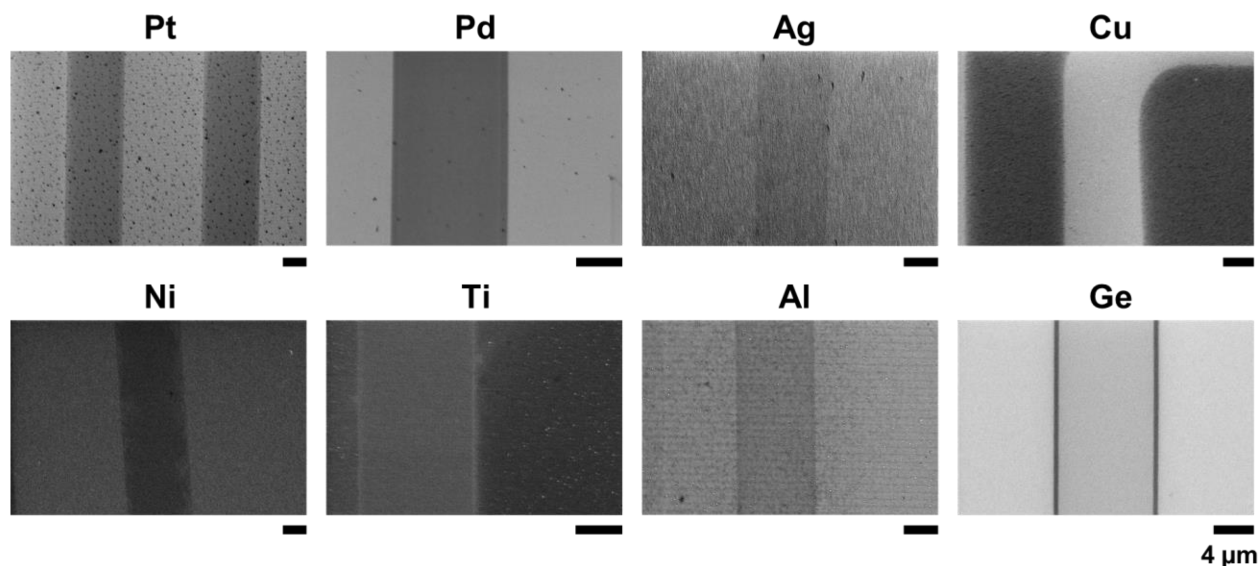

Figure S1. Representative high magnification scanning electron microscope images of patterned self-assembled monolayers of 11-mercapto-1-undecanol (MUO) on metal and semiconductor surfaces after chemical lift-off lithography corresponding to main text **Figures 2**,**3**. Regions where MUO was removed appear darker in contrast for Pt, Pd, Ag, Ni, Ti, and Al and brighter in contrast for Cu and Ge in these images. Scale bars are 4 µm for all images.

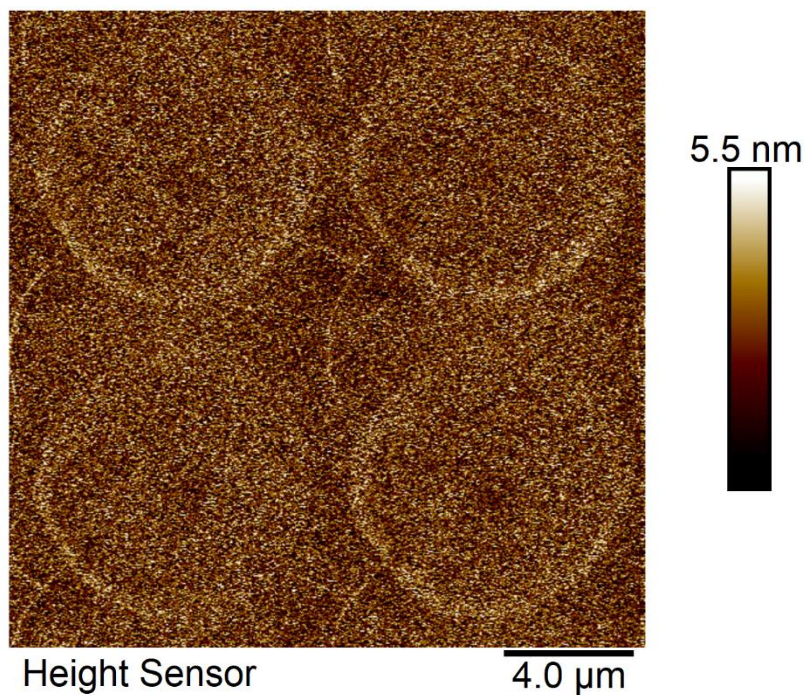

Figure S2. Representative atomic force microscopy image of a patterned (7.5 μm circles) self-assembled monolayer of 11-mercapto-1-undecanol on Ge after chemical lift-off lithography.

XPS Peak	Relative Sensitivity Factor
Pt 4f	5.58
Pd 3d	5.36
Ag 3d	5.99
Cu 2p	5.32
Ni 2p	4.04
Ti 2p	2.00
Al 2p	0.193
Ge 3d	0.536

Table S1. Relative sensitivity factors for metal and semiconductor peaks measured *via* X-ray photoelectron spectroscopy (XPS). Values are referenced from the CasaXPS software.