Supplementary Material for PCCP

Supporting Information

Ferrocenylalkylthiolate Labeling of Defects in Alkylthiol Self-Assembled Monolayers on Gold

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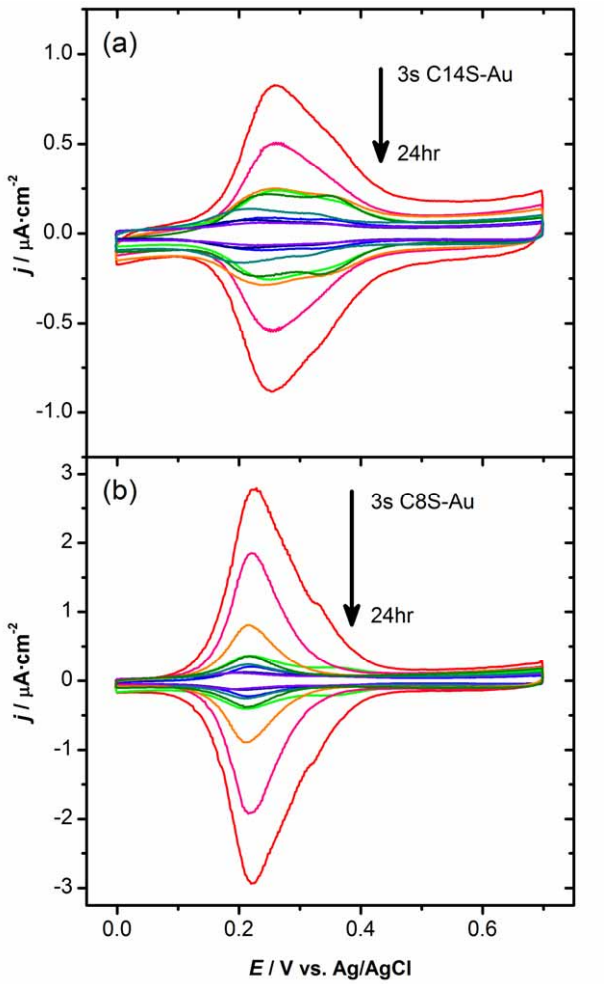

Figure S1. Labeling of defects in (a) C_{14}S-Au and (b) C_8S-Au SAMs that are formed using various incubation times ranging from 3s to 24 hrs. CVs are obtained in 1.0 M $HClO_4$ at a scan rate of 20 $mV \cdot s^{-1}$,

after labeled with 2 mM $FcC_{12}SH$ for 5s.

Table S1. List of Kinetics Parameters obtained from the Fitting of Data in Figure 8 to Diffusion Limited Langmuir Second-Order Equation[a]

$C_{14}S$-Au SAM formation conditions		k^a ($s^{-½}$)	A^a (%)
Concentration	**Formation time**		
0[b]	0[b]	6.09	101.2
200 μM	5 min	0.32	11.4
200 μM	2 hrs	0.57	4.33
1 mM	5 min	0.098	14.1
1 mM	2 hrs	0.013	35.1
5 mM	24 hrs	0.006	28.1

[a] $\Theta(t)=A*k*\sqrt{t}/(1+k*\sqrt{t})$ where A is the final coverage and k is the reaction rate constant. [b] denotes that a bare Au electrode is used.