Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics

Supplementary Information

Construction of a Metal-Organic Monolayer-Semiconductor Junction on a Hydrogen Terminated Si(111) Surface via Si-C Covalent Linkage and its Electric Property

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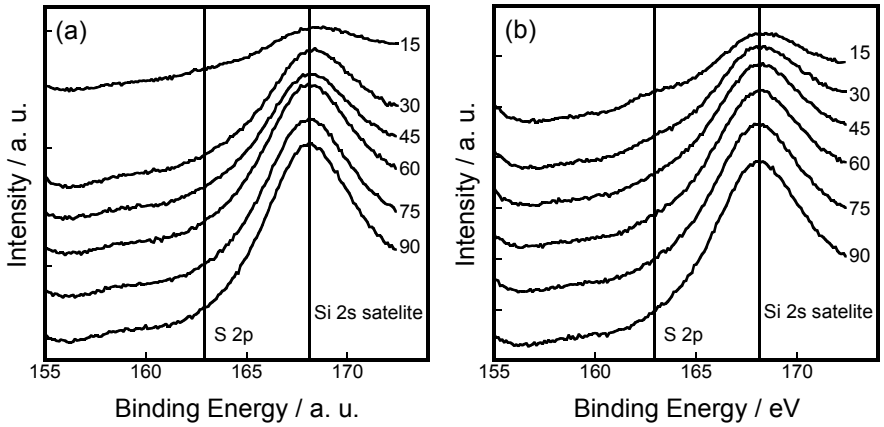

Figure S1. XP spectra in Si 2s (satellite)/S 2p regions of the (a) HSC11- and (b) PtSC11-Si(111) surfaces measured at take-off angles of 15, 30, 45, 60, 75 and 90 °. The S 2p peak is not well resolved from the Si 2s satellite peak. The contribution of the S 2p peak increased as the take-off angle is decreased since thiol group is at the outer most position of the monolayer.

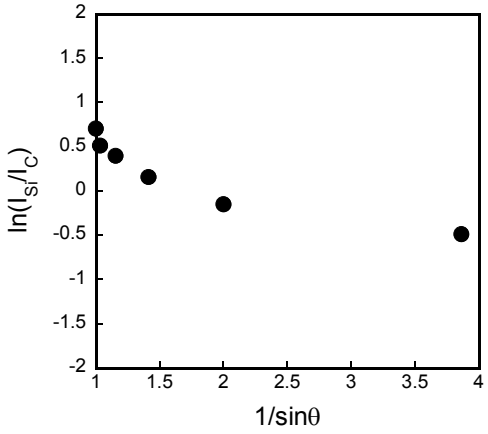

Figure S2. Take off angle dependencies of the integrated intensities of Si 2p peaks with respect to those of C 1s of the PtSC11-Si(111) surface. The slope of this plot is in between that of $\ln(I_{Si}/I_S)$ and $\ln(I_S/I_{Pt})$ with respect 1/sin θ, showing that carbon atoms are situated in between Si and S/Pt.