Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information to

Controlled Amino-functionalization by Electrochemical Reduction of Bromo and Nitro Azo Benzene Layers Bound to Si(111) Surfaces

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Constant N_{1s} signal upon XPS illumination

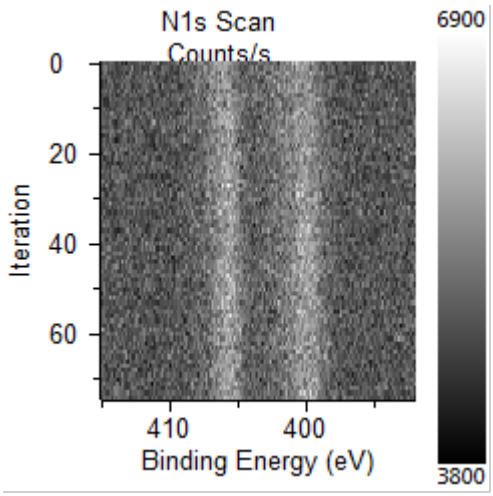

Figure A1. XPS N_{1s} spectra taken during 15 min (75 iterations) upon illuminating a sample of 4-nitrobenzenediazonium electrografted on Si with a pass energy of 50 eV. No significant changes were observed in the peak intensities with X-ray exposure time.

RMS roughness of the samples in AFM

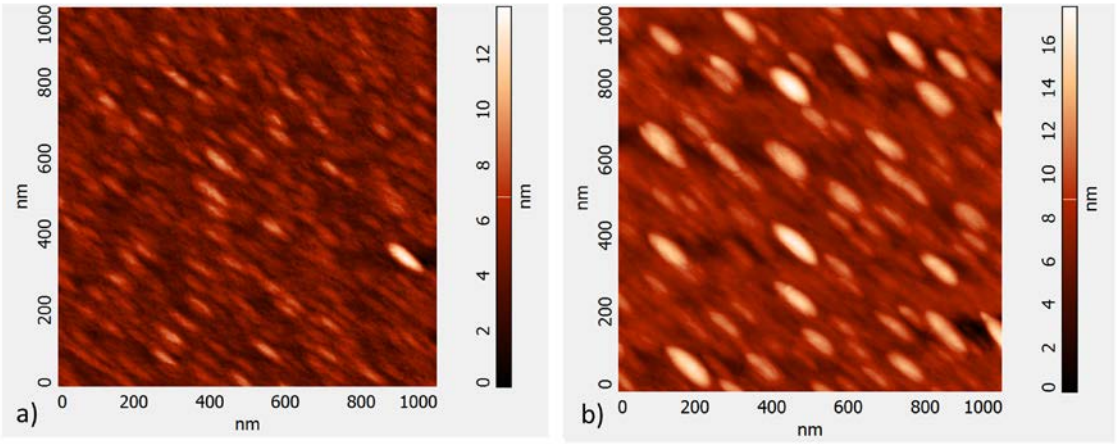

Figure A2. AFM topography scans of the samples before (a) and after (b) the electroreduction of 4-bromobenzenediazonium on Si. Upon electroreduction the rms roughness value increased from 1.1 nm to 1.5 nm for a 1 × 1 μm^2 scan.

Electroreduction of 4-BBD-modified Si (Azo-bond cleavage)

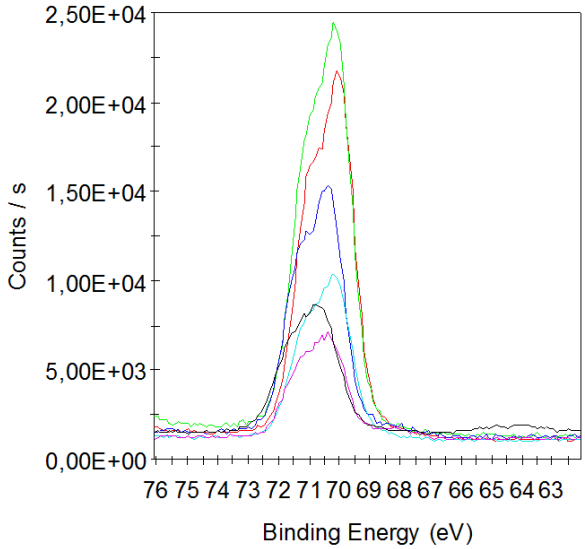

Figure A3. XPS Br_{3d} spectra of bromobenzene electrografted on Si (3 upper graphs), and bromobenzene after the reduction of azobenzene on Si (3 lower graphs). On average the reduction is 43%.