

**Electronic Supplementary Information**

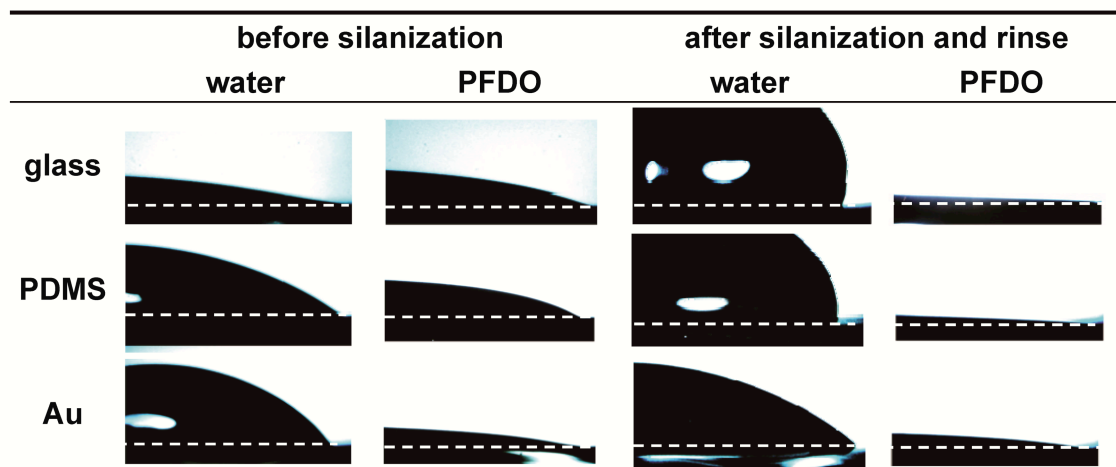
**25 December, 2012**

**Ms. ID: LC-ART-11-2012-041263**

**Highly Reproducible Chronoamperometric Analysis in Microdroplets**

Hong Liu, and Richard M. Crooks

3 Pages



**Figure S1.** Optical micrographs obtained after 10  $\mu\text{L}$  of deionized water or PFDO were dropcast onto glass, PDMS, and Au surfaces, respectively. The micrographs were obtained (left side) before and (right side) after silanization and rinsing with PFDO. The liquid-solid interface is highlighted by dashed white lines.

**Movie S1.** This movie shows generation of ~ 1 nL microdroplets containing 1.0 mM  $\text{Ru}(\text{NH}_3)_6^{3+}$  and 0.1 M  $\text{KNO}_3$  at a microfluidic T-junction. The microchannel was 21  $\mu\text{m}$  high and 100  $\mu\text{m}$  wide. The PFDO fluid was injected into the main channel at a flow rate of 10 nL/min, and the aqueous fluid was injected into the side channel at a flow rate of 20 nL/min. The movie was recorded at 20 frames/s and replays at real time. Figure 2 was abstracted from this movie.

**Movie S2.** This movie shows the microdroplets flowing into the narrow microchannel, which is 21  $\mu\text{m}$  high and 10  $\mu\text{m}$  wide. The flow rate is 30  $\mu\text{L}/\text{min}$ . The movie was recorded at 20 frames/s and replays at real time.