

Supplementary Information for

The electrochemical modulation of single molecule fluorescence

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Supplementary Movie 1. The effect of electrochemical potential on fluorescence intensity of ATTO 655 in oxygen scavenger (glucose and glucose oxidase) tris buffer. The imaging sample is COS-7 cells labeled for F-actin with ATTO 655.

Supplementary Movie 2. The electrochemical potential modulated the fluorescence intensity of ATTO 655 in presence of 20 mM ferricyanide and 20 mM ferrocyanide in oxygen scavenger tris buffer. At positive potential (0.4 V), ATTO 655 is at normal bright state, while at negative potential (-0.8 V), ATTO 655 is turned to very dim state. The imaging sample is COS-7 cells labeled for F-actin with ATTO 655.

Supplementary Movie 3. The fluorescence of ATTO 655 shows corresponding change along with the pulsed potential in oxygen scavenger buffer with ferro/ferricyanide couple. The sample was ITO surface where COS-7 cells were attached, with actin filaments labelled with ATTO 655. The potential was pulsed from -0.8 V to -0.3 V, -0.1 V, 0.1 V, and 0.4 V, respectively.