Fig. S1. Process flow for fabrication of ITO electrochemical microelectrode array. (a). A 110 nm-thick ITO film was sputtered onto a borosilicate #2 cover glass; (b). Shipley S1813 positive photoresist was spincoated onto the ITO-coated cover glass; (c). Photoresist-covered ITO cover glass was exposed to UV light through a high-resolution (20,000 dpi) transparency mask; (d). Development leads to patterning of the photoresist; (e). An acidic solution was used to wet etch the portion of the ITO film that was not protected by photoresist, leaving 20 μm-wide ITO stripes; (f). The photoresist protection layer was then removed with an acetone wash; (g) ~2 μm-thick Shipley S1813 positive photoresist was spincoated onto the patterned ITO cover glass and it was then baked on a hotplate; (h). Similar as in step (c), the photoresist-covered ITO cover glass was exposed to UV light through another transparency mask; (i) After developing, a 20 μm-wide opening orthogonal to the ITO stripes resulted in an array of 24 working electrodes with dimensions of 20 μm by 20 μm, whereas the bulk of the ITO stripes was insulated by the photoresist.