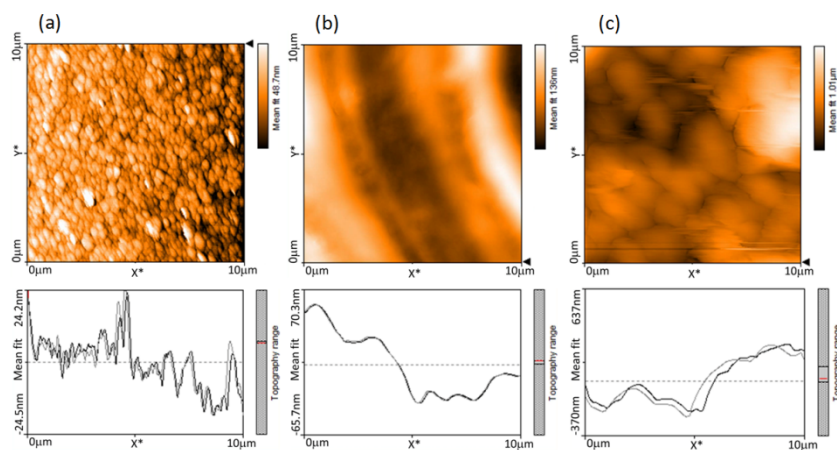


Supp. Figure 1. Biofilm growth on different anode materials. Cultures were inoculated onto different anode surfaces (to a final concentration of $5 \text{ nmol Chl cm}^{-2}$) and grown under low light (5 W m^{-2} ; 12 h light/dark) for eight days under benthic conditions. Percentage values represent the increase in biofilm chlorophyll content following the initial inoculation. Each point represents the mean \pm SE (N=5).



Supp. Figure 2. Additional information on the surface characteristics of the anodic materials are shown for ITO (a); SS (b) and PANI (c). Shaded surface maps (top) and 2D topography (bottom) were generated from AFM measurements.

Supp. Table 1. The rate of the photo response for different anodic materials. The rates are based on the change in voltage following 30 minutes of illumination (*ca.* 8 W m⁻²). Each value is the mean ± SE for ITO (N=18), SS (N=14), PANI (N=16) and CP (N=14).

Anode material	Rate of potential (mV hr ⁻¹)
SS	385 ± 20
ITO	196 ± 13
PANI	119 ± 8
CP	38 ± 17