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"Functionalization of Gold Surfaces for Specific and Reversible Attachment of a Fused β -Galactosidase and Choline-Receptor Protein"

SUPPORTING INFORMATION

Table S1. Atomic composition of monolayers as determined by XPS.

Monolayer structure		Atoms			
		S	C	N	O
TBA	a)	1	4	0	2
	b)	0.48	4	0	1.1
TBA + TCh (1:1)	a)	1	4.5	5	1
	b)	0.42	4.5	4.9	1
TBA-[DADOO-EA]- -Epi-CA (1:8)	a)	1	6.3	1.1	2
	b)	0.62	6.3	1.1	2.1
TBA-[DADOO-EA]- -Epi-TCh (1:8)	a)	1	6.6	1.1	2
	b)	0.73	6.6	0.52	2.5

^a Expected number of atoms per atom of sulfur in the monolayer. ^b Number of atoms detected in the monolayer normalized to the expected number of carbon atoms.

SUPPORTING INFORMATION

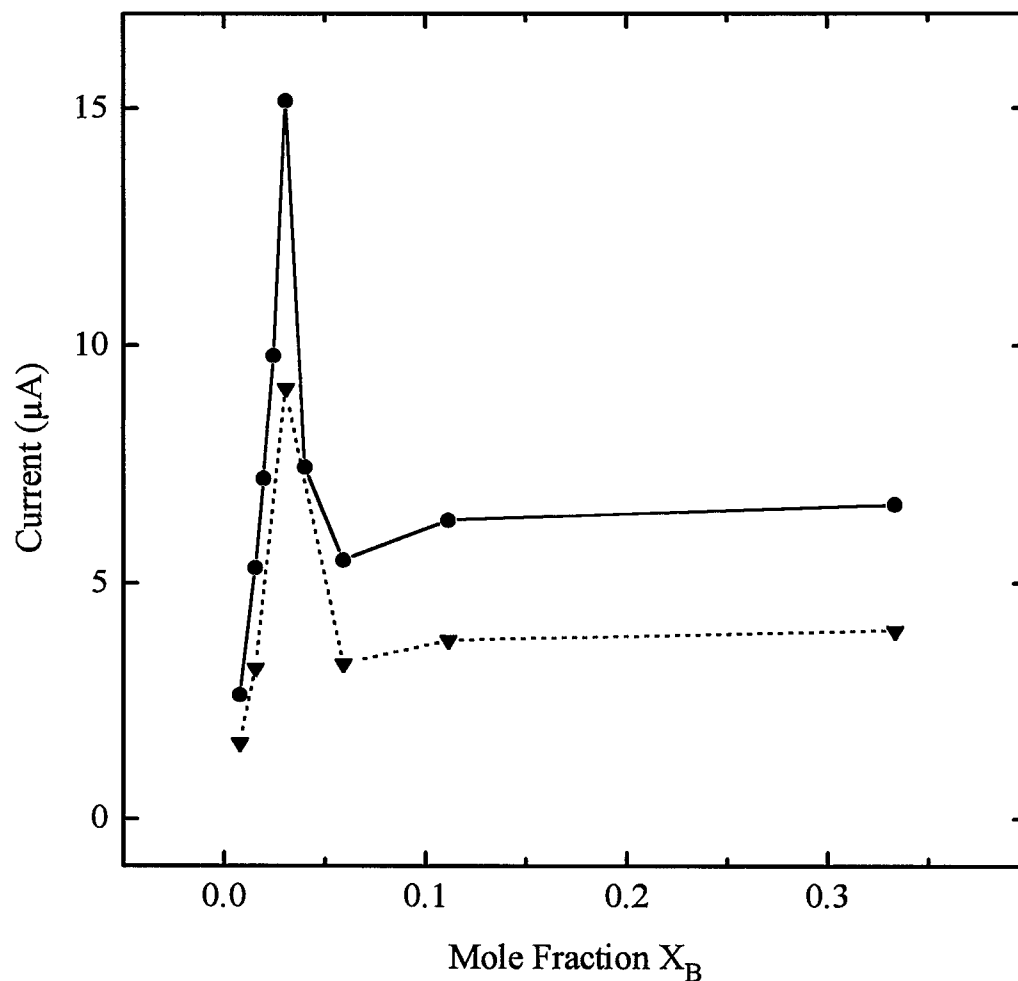


Figure S1. Anodic peak currents measured after 12 min. incubation in 1 mM PAPG solution of choline modified electrodes immersed in solutions of C-LYTA- β -Galactosidase chimera and washed with 50 mM phosphate buffer, pH 7.3m 1 M KCl as function of the mole fraction of DADOO in setp 2 of the monolayer synthesis (Fig. 2). Note that X_B does not necessarily represent the mole fraction of choline in the monolayer. TBA electrode (dashed line); TOA electrode (solid line). Other experimental conditions as in Fig. 8.

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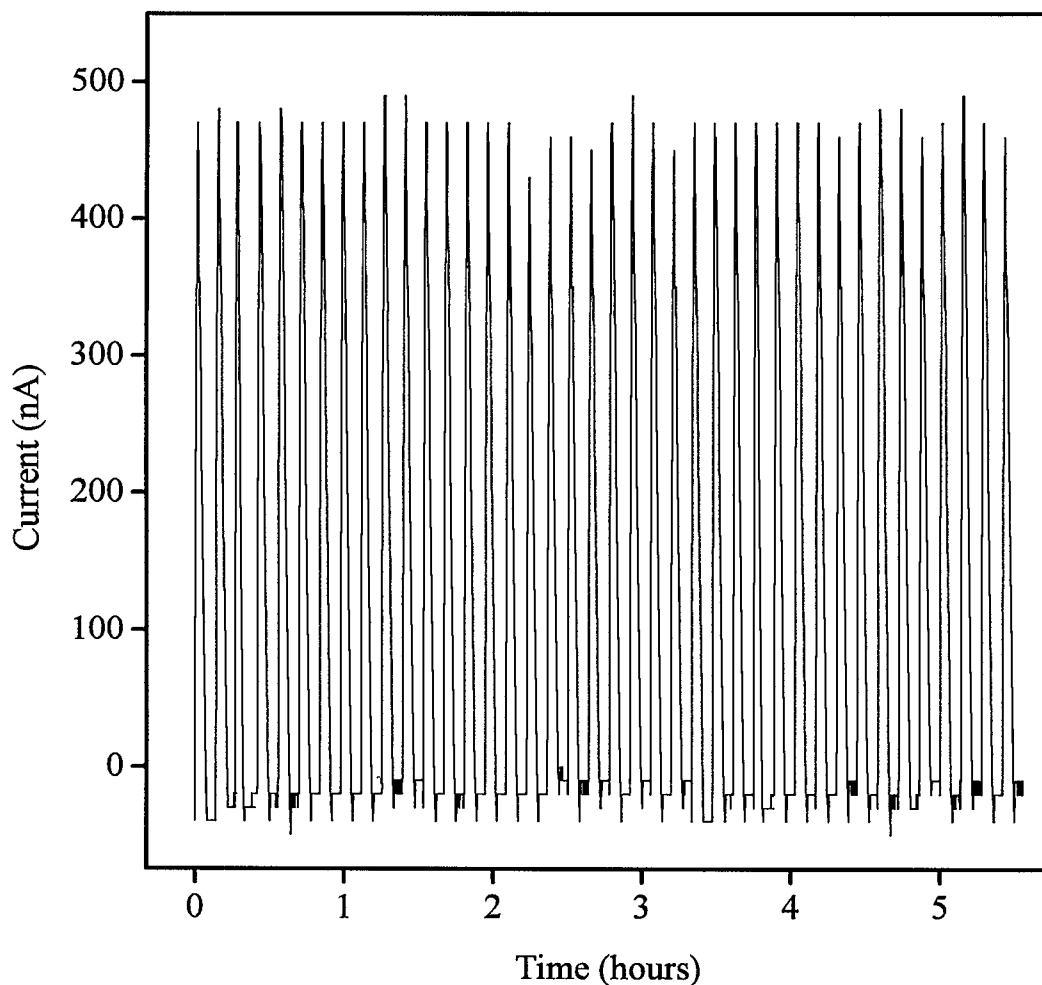


Figure S2. FIA recording of repetitive determinations of 4 mM PAPG in 50 mM phosphate buffer, pH 7.3, 0.1 M KCl using a gold disc electrode (0.07 cm^2) modified with choline-monolayer and C-LYTA- β -GAL. Flow injection conditions: flow rate, 4 ml min^{-1} ; injection volume, 0.05 ml. The applied potential was 0.25 V vs Ag/AgCl, 3 M NaCl.