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Juan Madoz, Boris A. Kuznetzov, Francisco J. Medrano, José L. García and Victor M. Fernández.

"Functionalization of Gold Surfaces for Specific and Reversible Attachment of a Fused ß-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.

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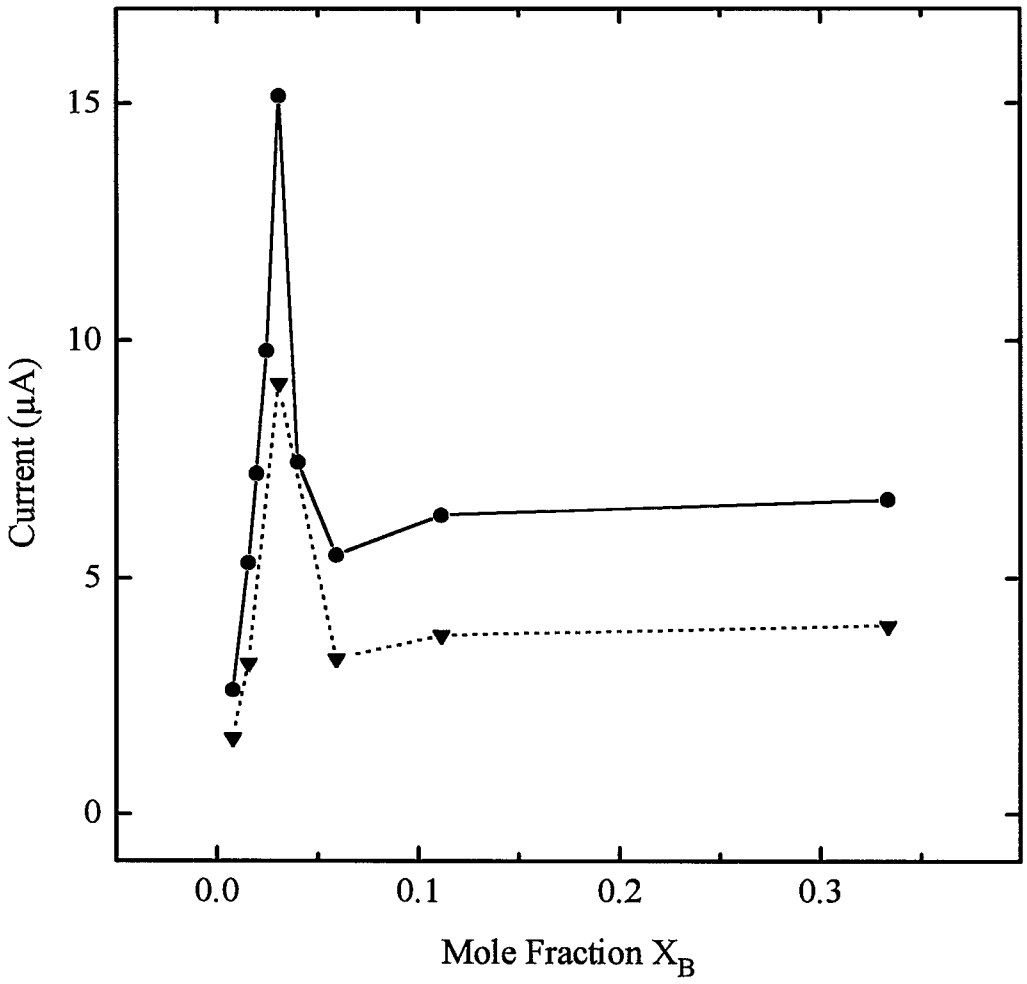


**Figure S1.** Anodic peak currents measured after 12 min. incubation in 1 mM PAPG solution of choline modified electrodes immersed in solutions of C-LYTA-ß-Galactosidase chimera and washed with 50 mM phosphate buffer, pH 7.3m 1 M KCl as function of the mole fraction of DADOO in setp 2 of the monolayer 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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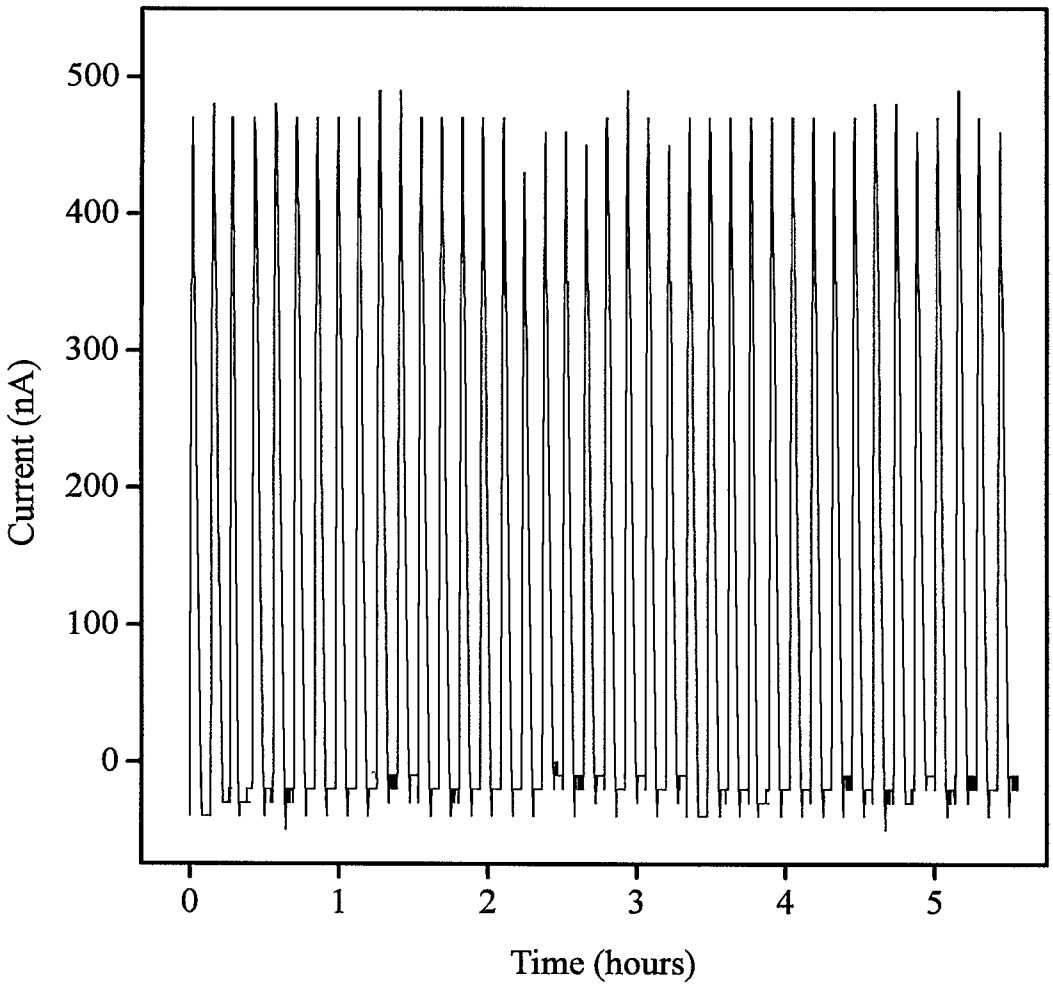


**Figure S2.** FIA recording of repetitive determinations of 4 mM PAPG in 50 mM phosphate buffer, pH 7.3, 0.1 M KCl using a gold disc electrode (0.07 $cm^{-2}$) modified with choline-monolayer and C-LYTA-ß-GAL. Flow injection conditions: flow rate, 4 ml $min^{-1}$; injection volume, 0.05 ml. The applied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