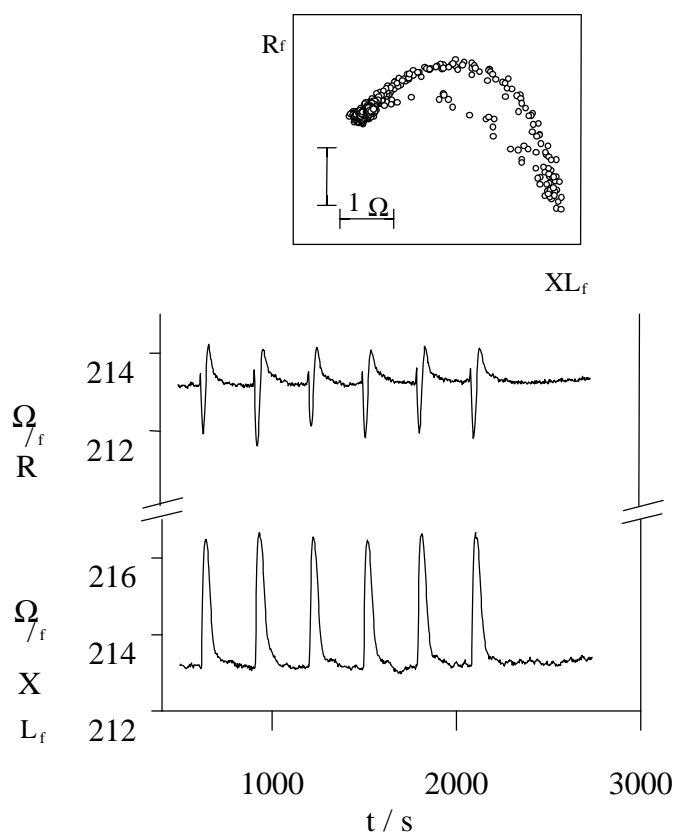
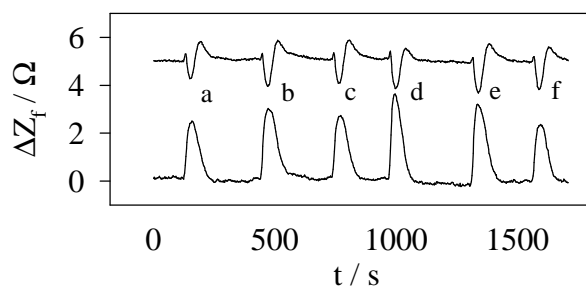


## SUPPORTING INFORMATION

QCM impedance components  $R_f$  and  $XL_f$  for 6 injections of 50  $\mu\text{L}$  of KCl 0.3M showing excellent repeatability. Inset: parametric plot of  $R_f$  vs.  $XL_f$ , [KCl] is the parameter and increases clockwise. Note that all the injections lay on the same parametric curve, showing a strong hysteresis.



Variation of  $R_f$  and  $XL_f$  for injections of NaCl solutions buffered at different pH. The solutions were injected directly in the flow system. The gold electrode was previously derivatized with aminoethanethiol. a) pH=6.4, b) pH=5.0, c) pH=6.1, d) pH=9.2, e) pH=3.7, f) pH=6.4. pH was measured close to the QCM cell. Note that the  $XL_f$  variation (open circle diameter) is greater for higher pH.

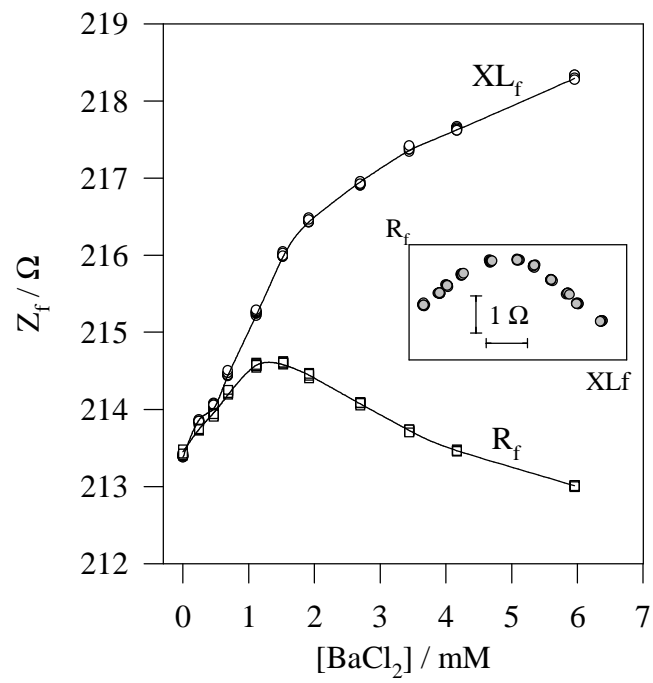


QCM impedance components

$R_f$  and  $XL_f$  vs.  $BaCl_2$  concentration.

Inset: parametric plot of  $R_f$  vs.  $XL_f$ ,

$[BaCl_2]$  is the parameter and increases clockwise.

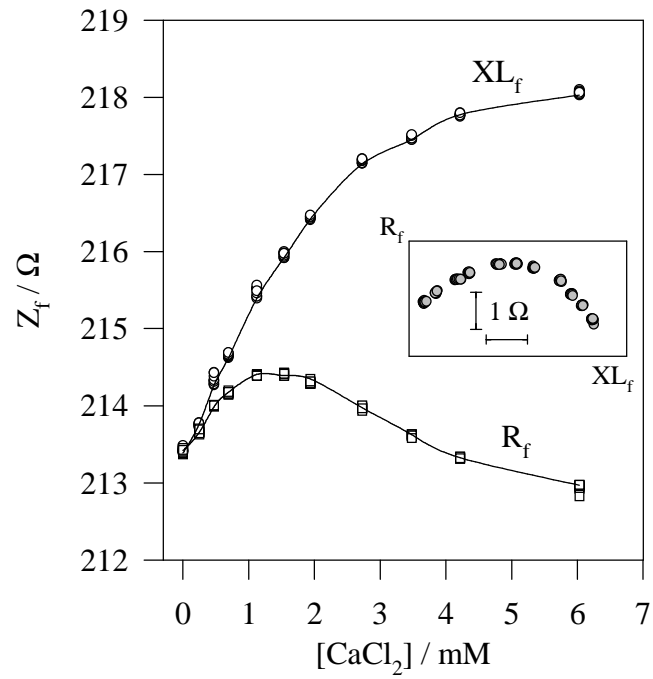


QCM impedance components

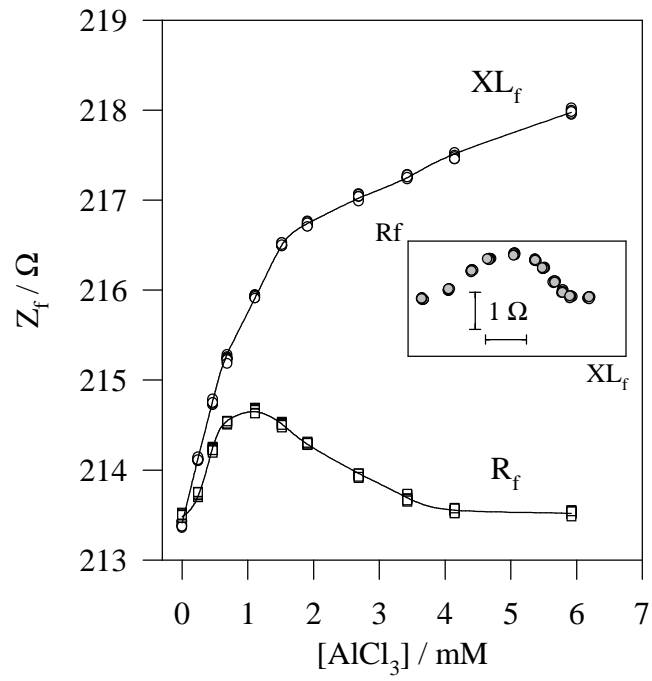
$R_f$  and  $XL_f$  vs.  $\text{CaCl}_2$  concentration.

Inset: parametric plot of  $R_f$  vs.  $XL_f$ ,

$[\text{CaCl}_2]$  is the parameter and increases clockwise.



QCM impedance components  
 $R_f$  and  $XL_f$  vs.  $AlCl_3$  concentration.  
Inset: parametric plot of  $R_f$  vs.  $XL_f$ ,  
 $[AlCl_3]$  is the parameter and increases clockwise.



QCM impedance components

$R_f$  and  $XL_f$  vs.  $ZnSO_4$  concentration.

Inset: parametric plot of  $R_f$  vs.  $XL_f$ ,

$[ZnSO_4]$  is the parameter and increases clockwise.

