Accessory publication

Impact of pH on Cd^{II} partitioning between alginate gel and aqueous media

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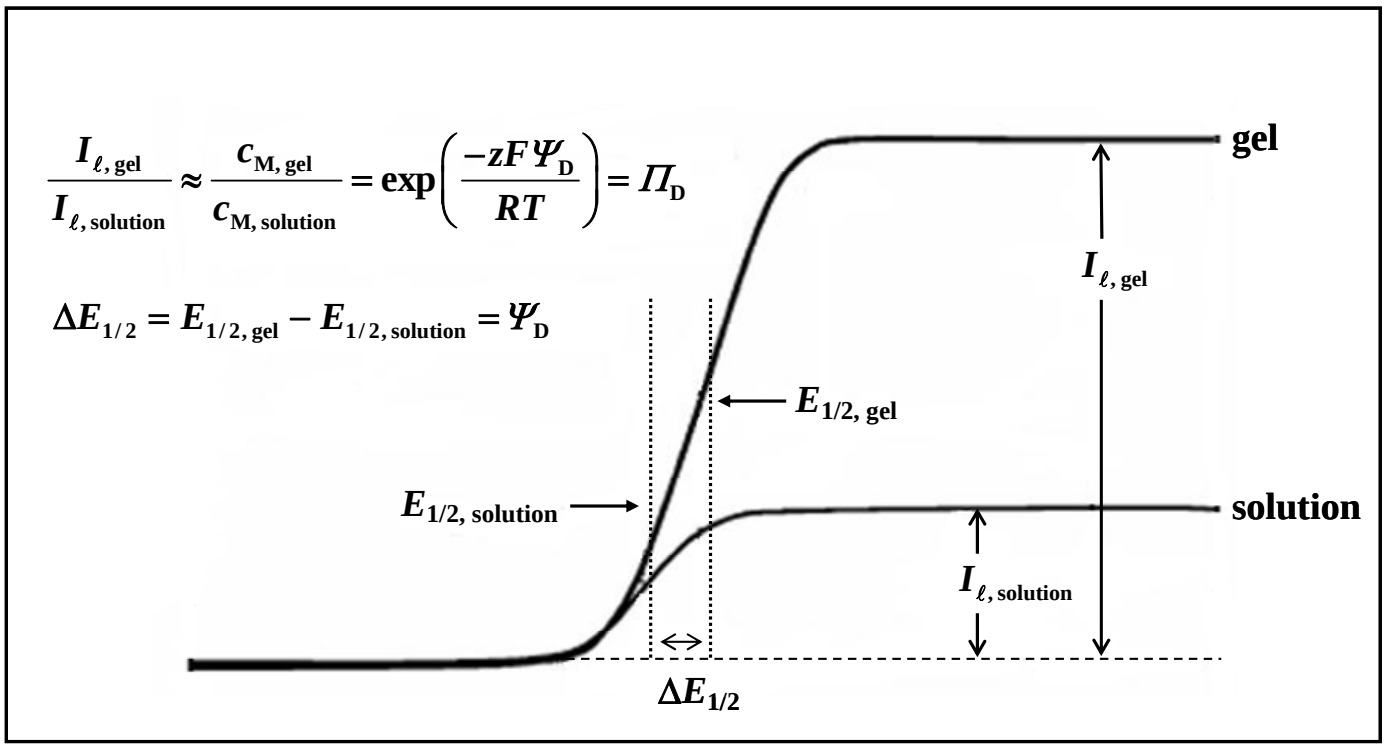

Fig. A1. Schematic representation of the information obtained from the diffusion-limited steady-state Cd voltammograms for an alginate gel-sol system in Donnan equilibrium. The key features are the limiting current, I_ℓ, and the half-wave potential, $E_{1/2}$. After Davis et al.[17]

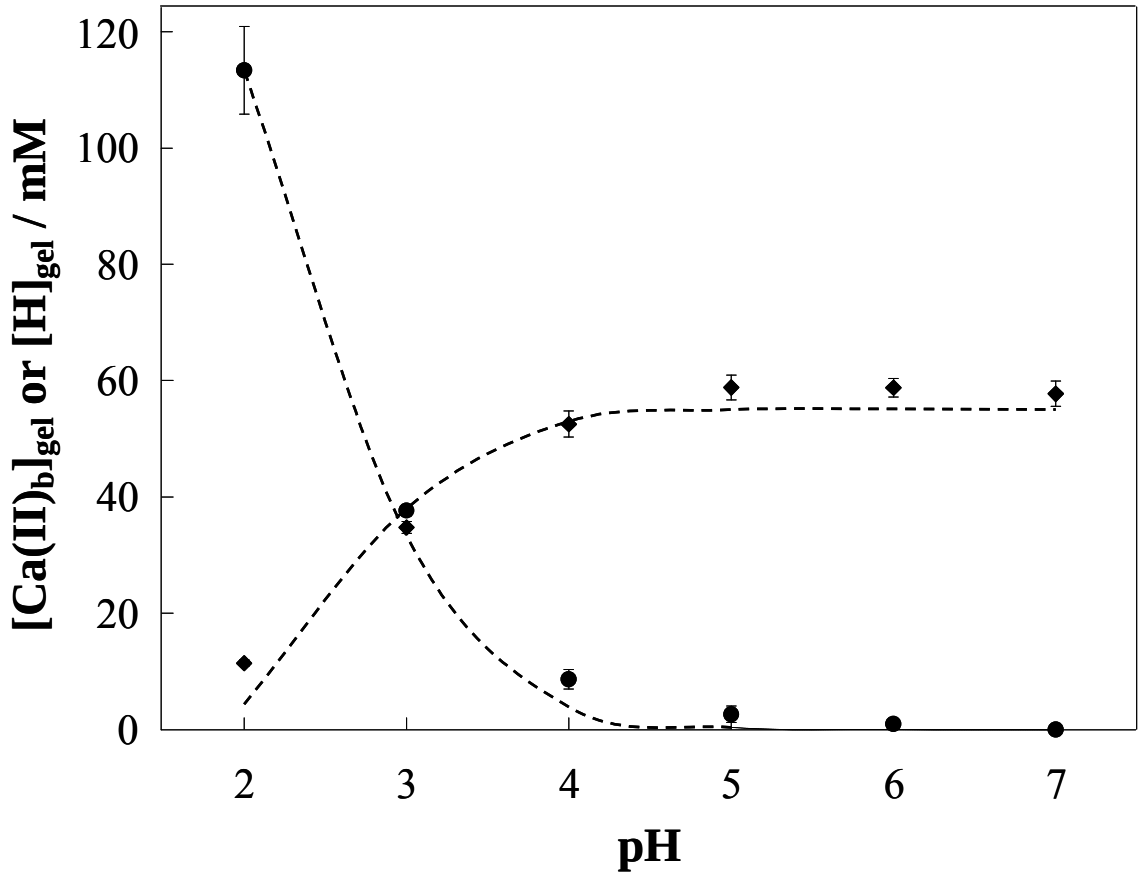

Fig. A2. Concentration of bound calcium, [Ca^{II}b]gel (♦), and bound protons, [H]gel (●), in alginate gel as a function of pH at various bulk solution concentrations of Cd_2+ (Sol I – IV). *I* = 10 mM (3 mM $Ca(NO_3)_2$ + 1 mM $NaNO_3$).

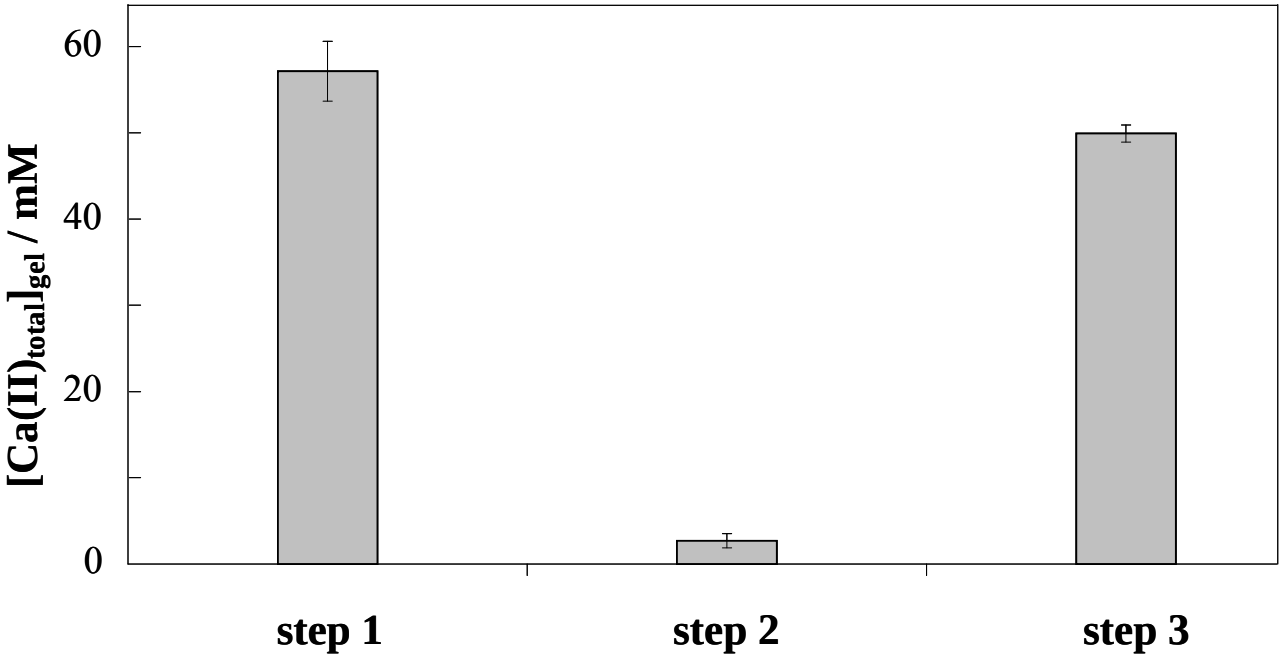

Fig. A3. Total Ca content of alginate gel, $[Ca^{II}_{total}]_{gel}$, after consecutive equilibration in 3 mM $Ca(NO_3)_2$ + 1 mM $NaNO_3$ (step 1), 1 M HNO_3 (step 2), and once again in 3 mM $Ca(NO_3)_2$ + 1 mM $NaNO_3$ (step 3).

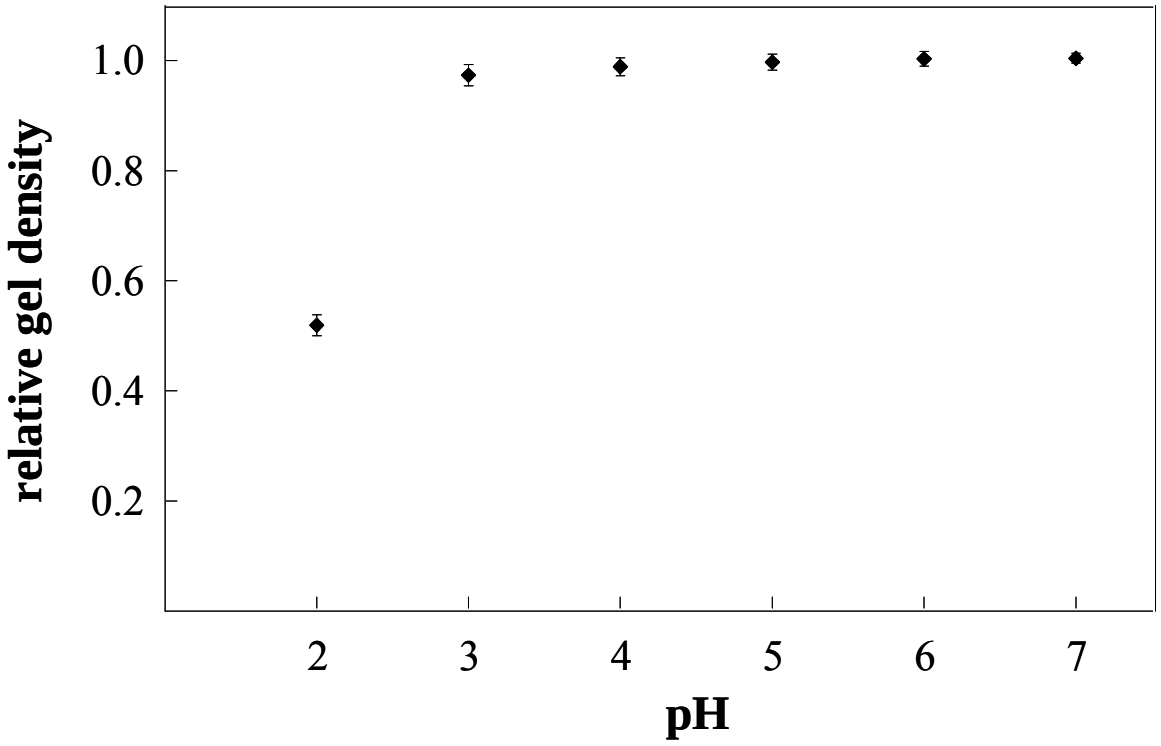

Fig. A4. Relative density of 1% alginate gels as a function of pH. I = 10 mM (3 mM $Ca(NO_3)_2$ + 1 mM $NaNO_3$). A reference value of 1 refers to the gel density following exposure of the gels to the standard setting solution of 50 mM $Ca(NO_3)_2$ + 20 mM $NaNO_3$. Error bars represent the standard deviation.