

Supporting Information Figure Captions

- S1. Normalised force versus separation curve for a silica tip interacting with a silica flat plate (thermally oxidised silicon wafer) in aqueous CTAB [1.6 mM] solution. The solid lines correspond to interaction at constant charge (upper limit) and constant potential (lower limit) fitted with $R_{\text{eff}} = 700 \text{ nm}$, $\kappa^{-1} = 13.65 \text{ nm}$ and $\Psi_d = 90 \text{ mV}$.
- S2. Typical normalised force of interaction ($R_{\text{eff}} = 700 \text{ nm}$) for the glutaric dialdehyde/tip system on surface approach (triangles) and upon separation (squares) measured in Milli-Q water at natural pH.
- S3. Force maps of an oocyst obtained with a silica tip at 0.2 mM KNO_3 and pH 3.85. Maps correspond to height (a) constant compliance (b), decay length of the repulsive force (c) and the extrapolated (to zero separation; see text) magnitude of the repulsive force (d).
- S4. Force maps of an oocyst obtained with a silica tip at 0.2 mM KNO_3 and pH 8.23. Maps correspond to height (a) constant compliance (b), decay length of the repulsive force (c) and the extrapolated (to zero separation; see text) magnitude of the repulsive force (d).

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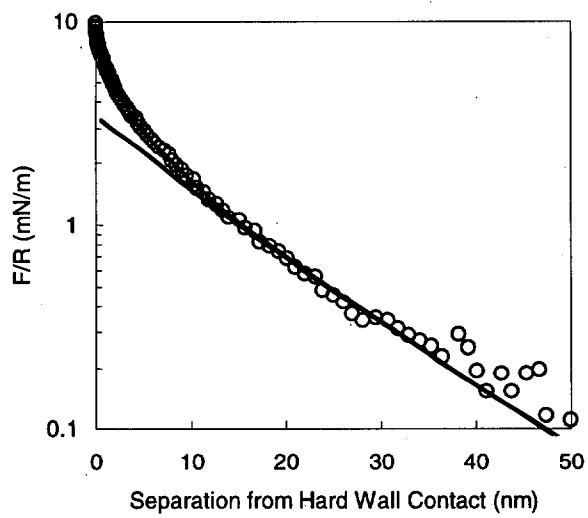


Figure S1

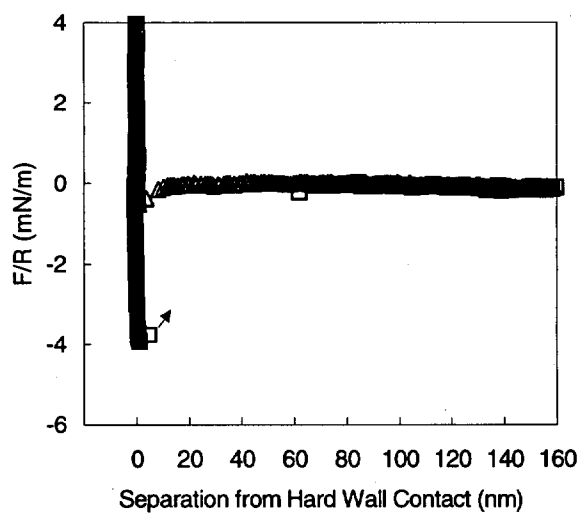


Figure S2

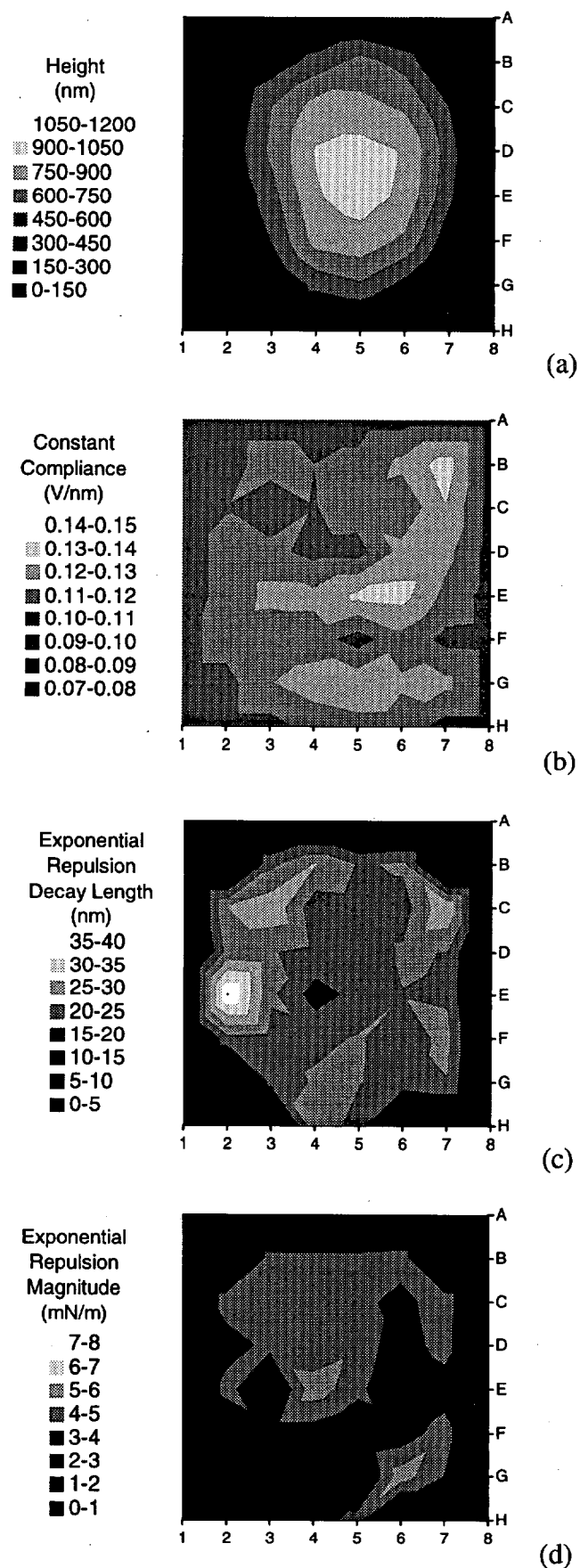


Figure S3

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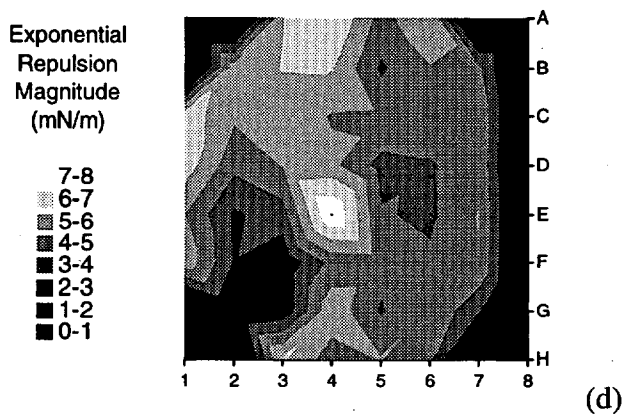
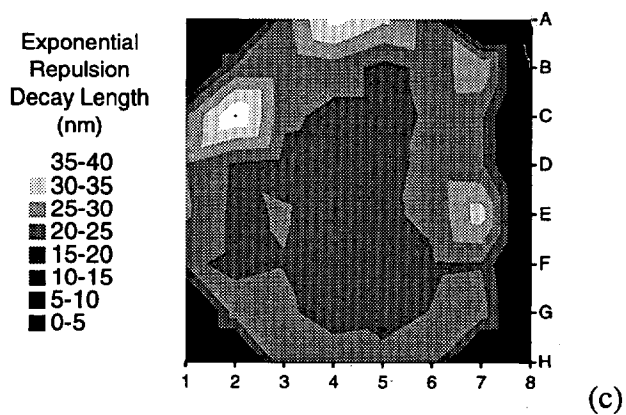
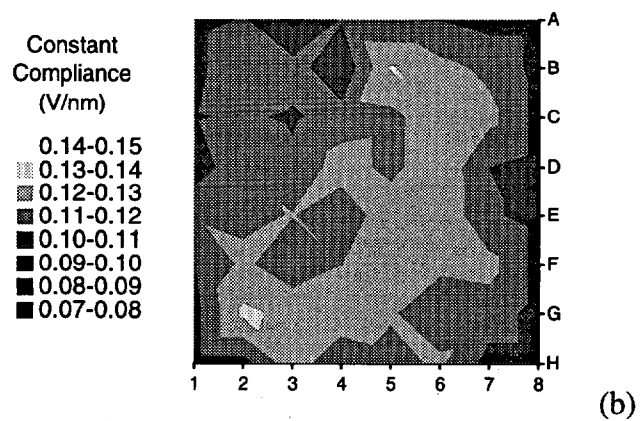
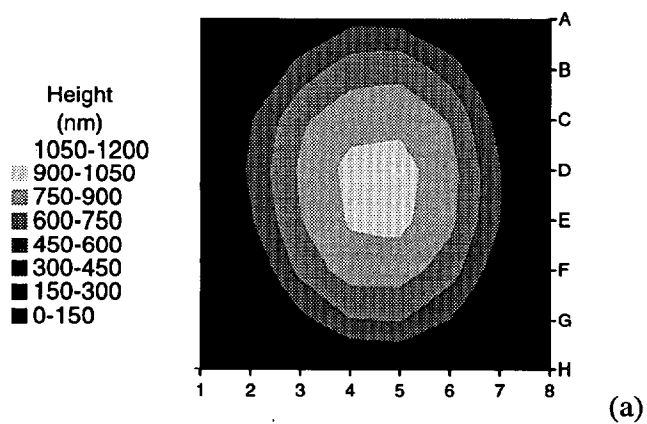


Figure S4