

SUPPORTING INFORMATION

Opposing Effects of Humidity on Rhodochrosite Surface Oxidation

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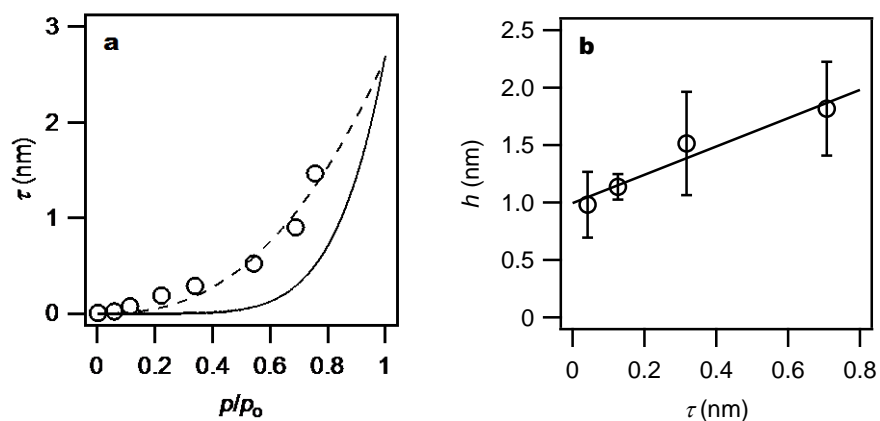


Figure S1. (a) The thickness of condensed water layer and (b) its correlation with nanostructure thickness. The circles in *a* are experimental data for calcite from Ref. 3. The dashed curve is the least-square fit to the Freundlich isotherm $\tau = (2.7(\pm 0.5))(p/p_0)^{2.5(\pm 0.5)}$, $R^2 = 0.96$. The solid curve in *a* is $\tau = 2.7(\pm 0.5)(p/p_0)^{6.0(\pm 0.4)}$ for rhodochrosite, where the pre-exponential factor of $2.7(\pm 0.5)$ nm is taken from the Freundlich isotherm for calcite. The power of $6.0(\pm 0.4)$ is obtained from fitting the data in Figure 3c to Eq. 3. The solid line in *b* is a linear fit.