Supporting Information

Inhibition of Pathological Mineralization of Calcium Phosphate by Phosphorylated Osteopontin Peptides through Step-Specific Interactions

Shiyan Li,† Shanshan Wu,† Defeng Nan, Wenjun Zhang, and Lijun Wang*
College of Resources and Environment, Huazhong Agricultural University, Wuhan 430070, China

Corresponding Author
*E-mail: ljwang@mail.hzau.edu.cn.

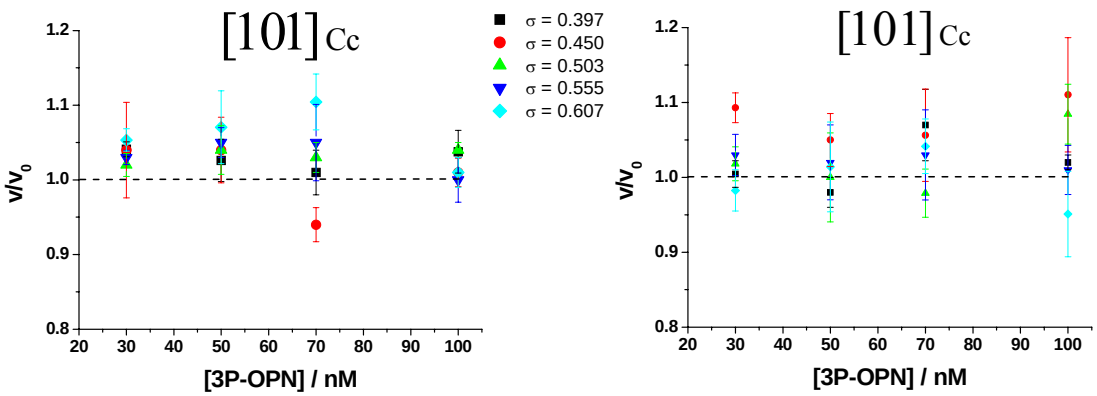

Figure S1. Plots of the $[10\bar{1}]_{Cc}$ and $[101]_{Cc}$ step velocity relative to peptide-free system vs. 3P-OPN concentration at various supersaturations (σ). There was no obvious change in the spreading rates of both steps in the absence and presence of 3P-OPN. Although the measured step velocities were not perfectly constant, the maximum variation is smaller than about 10%.

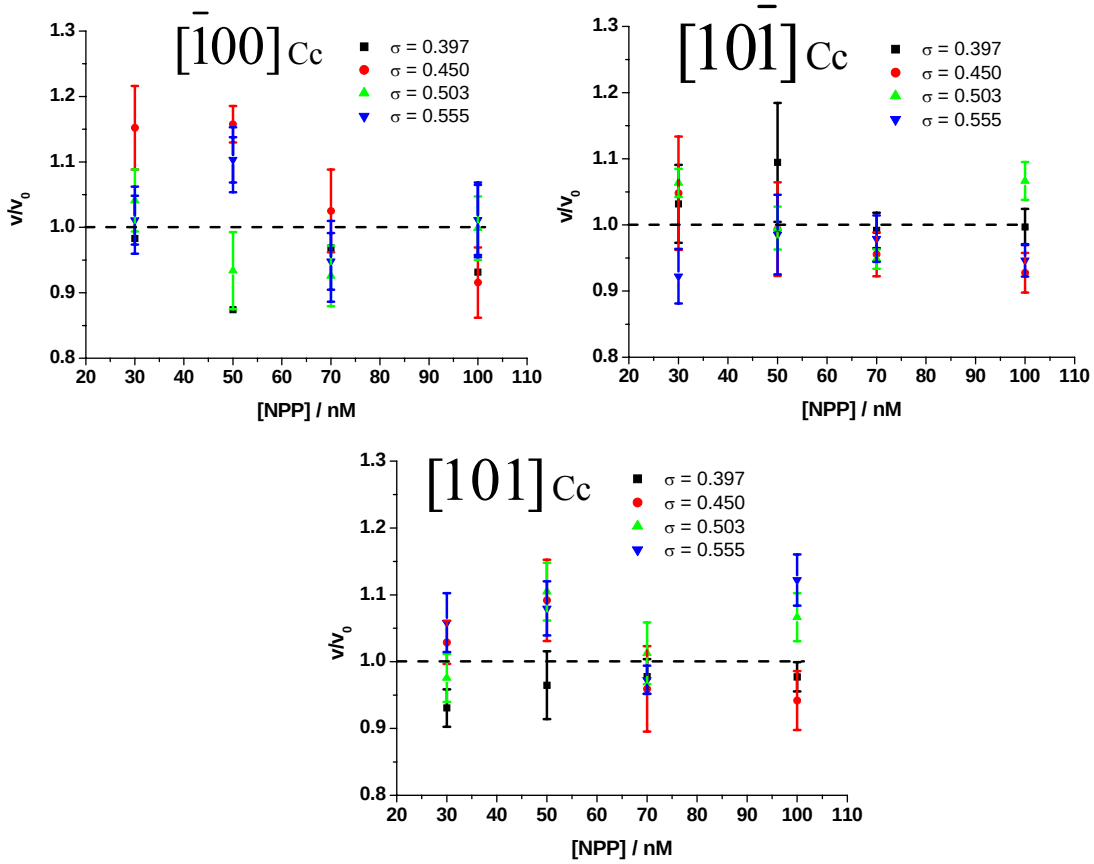

Figure S2. Plots of the $[\bar{1}00]_{Cc}$, $[10\bar{1}]_{Cc}$ and $[101]_{Cc}$ step velocity relative to peptide-free system vs. NPP concentration at various supersaturations (σ). There was no significant change in the spreading rates of the three steps in the absence and presence of NPP.

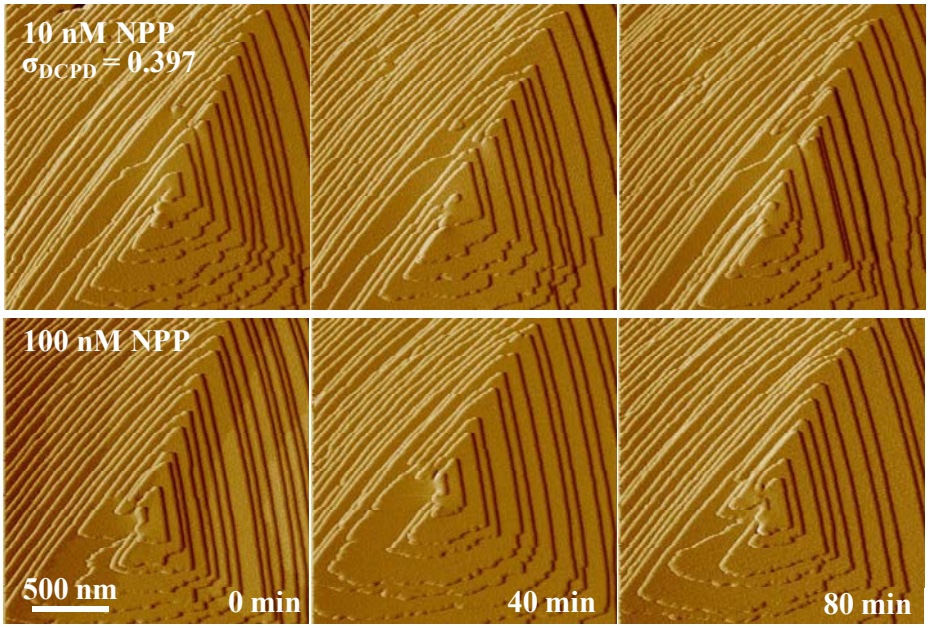

Figure S3. AFM deflection images showing the effect of NPP on growth hillock morphology at σ = 0.397 before and after 40 min and 80 min of addition of 10 or 100 nM NPP, revealing the absence of the obvious change of step density of the $[10\bar{1}]_{Cc}$, $[\bar{1}00]_{Cc}$, and $[101]_{Cc}$ steps.

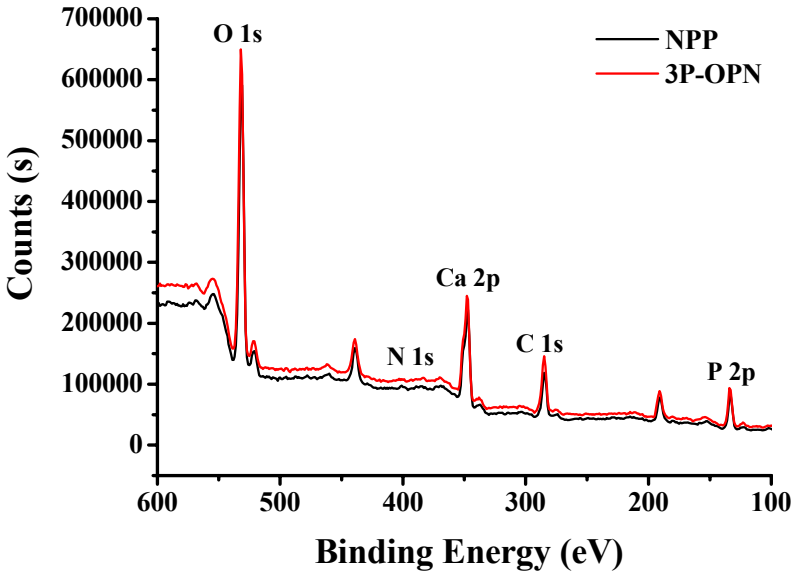

Figure S4. High-resolution X-ray photoelectron spectra of the chemical composition of 3P-OPN or NPP adsorbed to DCPD crystallites.