Supplementary Information

Atomically Resolved Calcium Phosphate Coating on a Gold Substrate

Noah Metoki,^a Sung Il-Baik,^{b,c} Dieter Isheim,^{b,c} Daniel Mandler,^d David N. Seidman *^{b,c,e} and Noam Eliaz *^a

^aBiomaterials and Corrosion Lab, Department of Materials Science and Engineering, Tel-Aviv University, Ramat

Aviv 6997801, Israel

^bDepartment of Materials Science and Engineering, Northwestern University, 2220 Campus Drive, Evanston,

Illinois 60208-3108, United States

°Northwestern University Center for Atom-Probe Tomography (NUCAPT), 2220 Campus Drive, Evanston, Illinois

60208-3108, United States

^dInstitute of Chemistry, The Hebrew University of Jerusalem, Edmond J. Safra Campus, Givat Ram, Jerusalem

9190401, Israel

NanoAl LLC, Illinois Science + Technology Park, 8025 Lamon Ave, Suite 446, Skokie, IL 60077, United States
<u>*neliaz@tauex.tau.ac.il</u>

*d-seidman@northwestern.edu



Figure S1. Sample preparation using dual-beam FIB microscopy for APT characterization. (a) and (b) The coated nanotip prior to FIB. (c) Preparation of the nanotip using Ga^+ ion-beam milling. (d) Needle-shaped APT nanotip formed with a ~35 nm radius of curvature.



Figure S2. Preparation of the TEM sample. (a) CaP/Au coating on glass. (b) Protective Pt deposition on the coating and Ga⁺ ion-beam milling of the specimen. (c) Inset of image b, describing the different layers in the specimen. (d) Final specimen for TEM.