



Sintering-Based In-Situ Synthesis and Characterization by TEM of Noble Metal Nanoparticles for Ceramic Glaze Color Control

Karthik Lalwani, Nathan Dinh, Michael C. Leopold and Ryan H. Coppage *

Department of Chemistry, Gottwald Center for the Sciences, University of Richmond, Richmond, VA 23173, USA; karthik.lalwani@richmond.edu (K.L.); nathan.dinh@richmond.edu (N.D.); mleopold@richmond.edu (M.C.L.)

* Correspondence: rcoppage@richmond.edu

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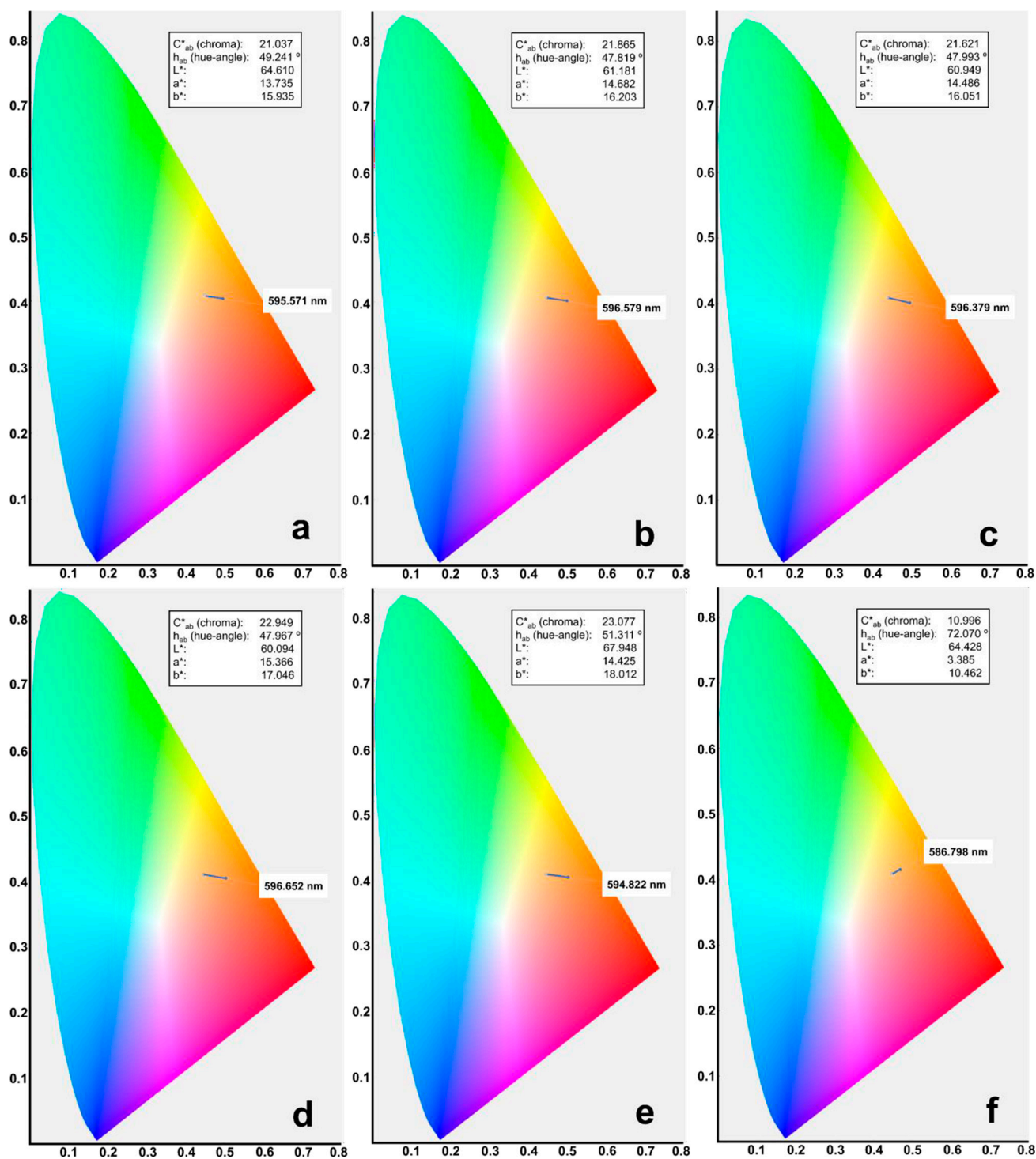


Figure S1. Chromaticity diagrams and CIE Lab color measurements for the 100:0 (a), 80:20 (b), 60:40 (c), 40:60 (d), 20:80 (e), and 0:100 (f) oxidation samples.

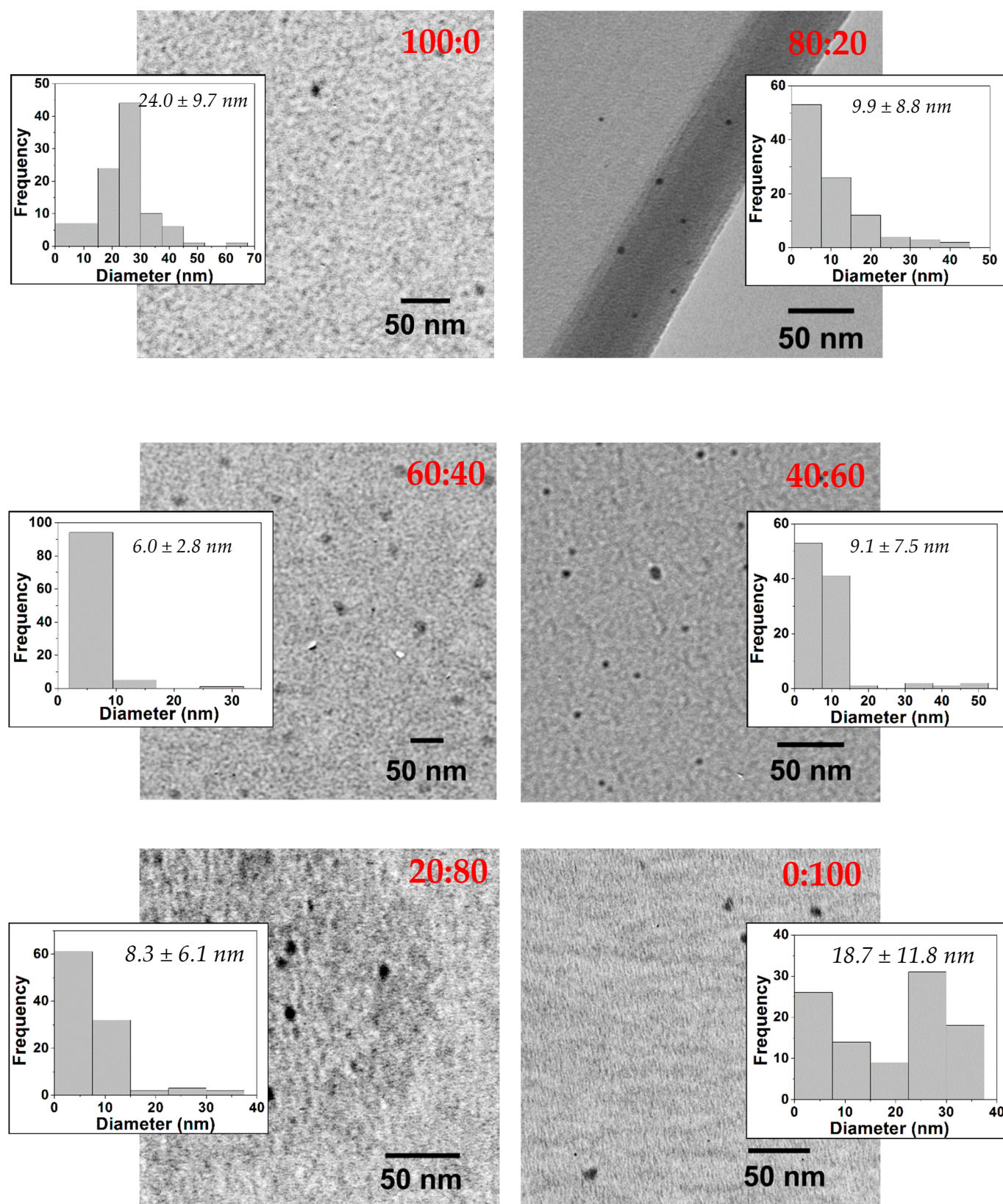


Figure S2. Typical TEM images for **oxidative firing** samples with varying Au:Ag salt ratios and corresponding histogram analysis of average core size with standard deviation (insets).

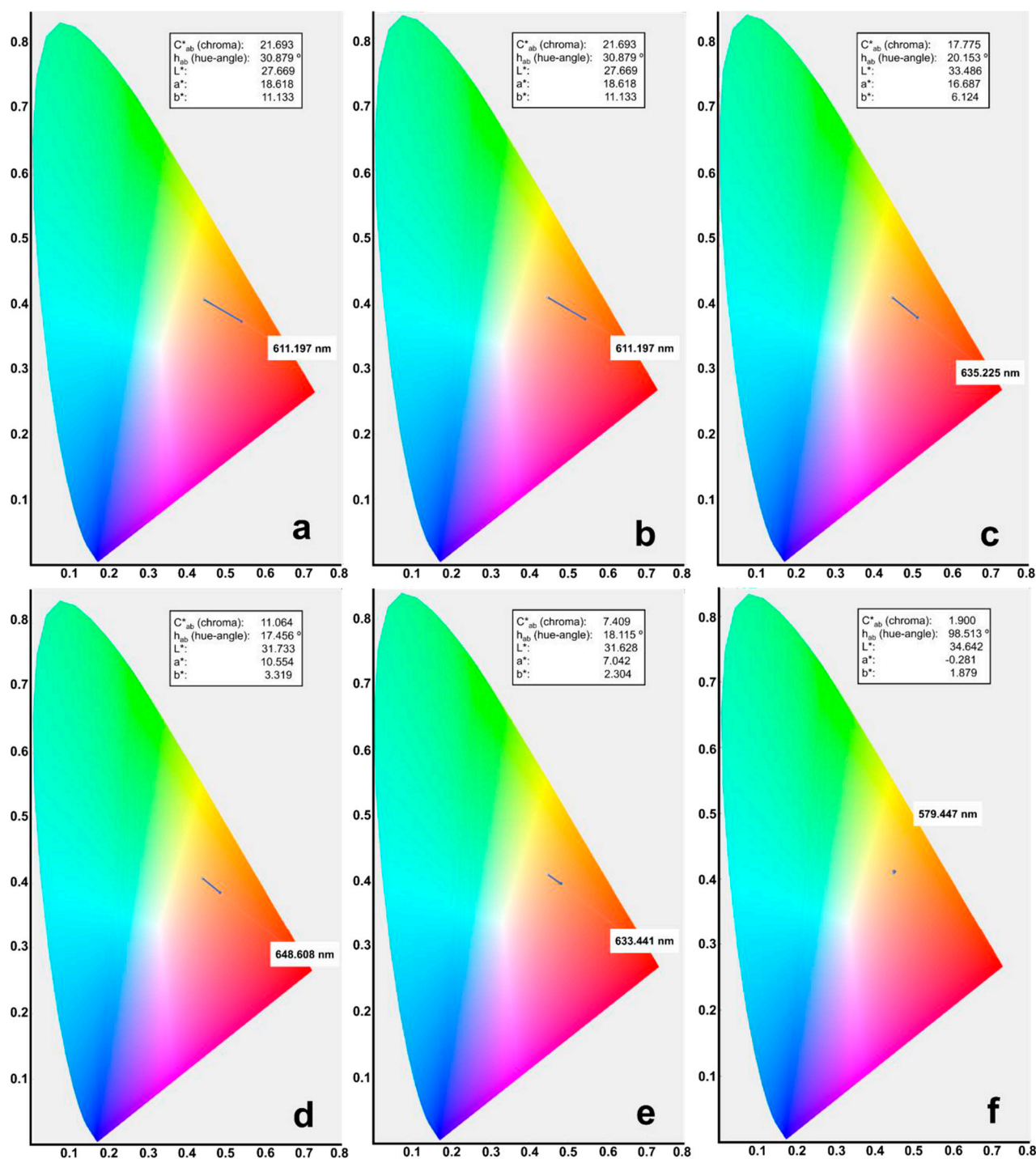


Figure S3. Chromaticity diagrams and CIE Lab color measurements for the 100:0 (a), 80:20 (b), 60:40 (c), 40:60 (d), 20:80 (e), and 0:100 (f) reduction samples.

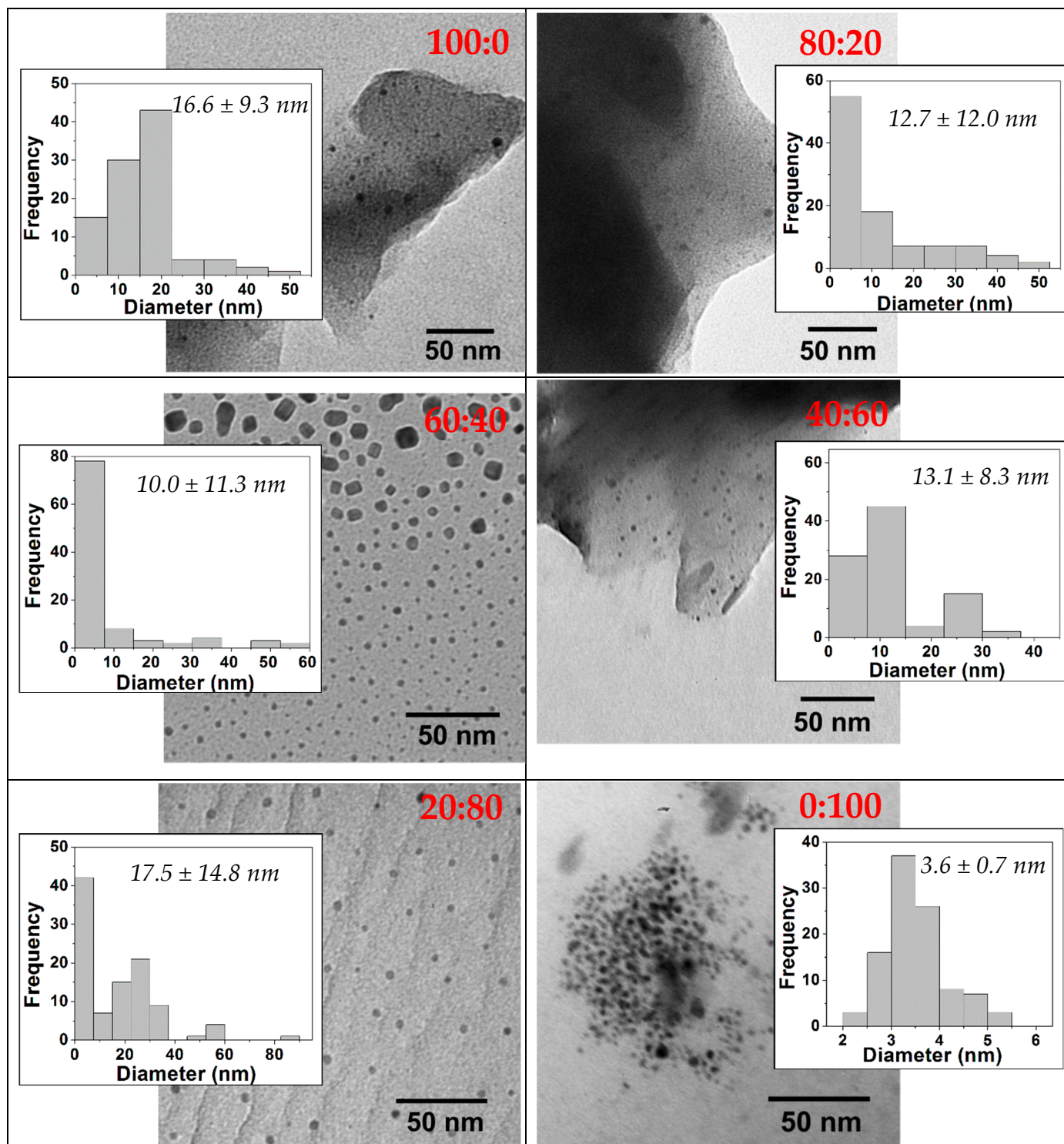


Figure S4. Typical TEM images for **reductive firing** samples with varying Au:Ag salt ratios and corresponding histogram analysis of average core size with standard deviation (*insets*).

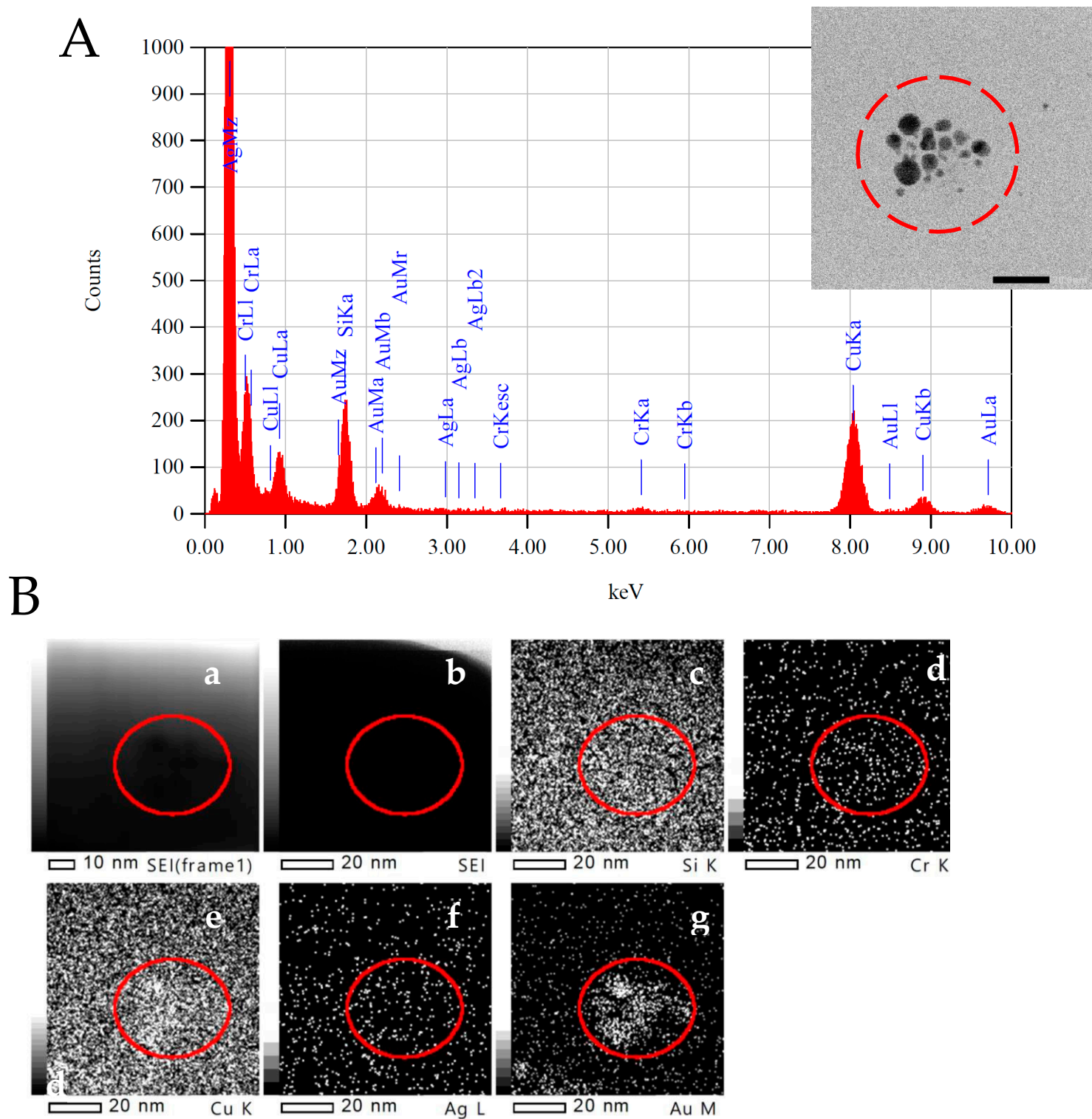


Figure S5. EDS analysis of field with NPs for 80:20 (area designed in image (inset) and **(B)** corresponding elemental mapping including (a) (b) carbon overlays, (c) Si, (d) Cr, (e) Cu, (f) Ag, and (g) Au. Note: SM-3, B-f (Ag) and SM-3B-g (Au) are also represented in Figure 7. It should be noted that chromium is a common impurity in mined glaze ingredients and the TEM grid is copper, so both are expected to be present.

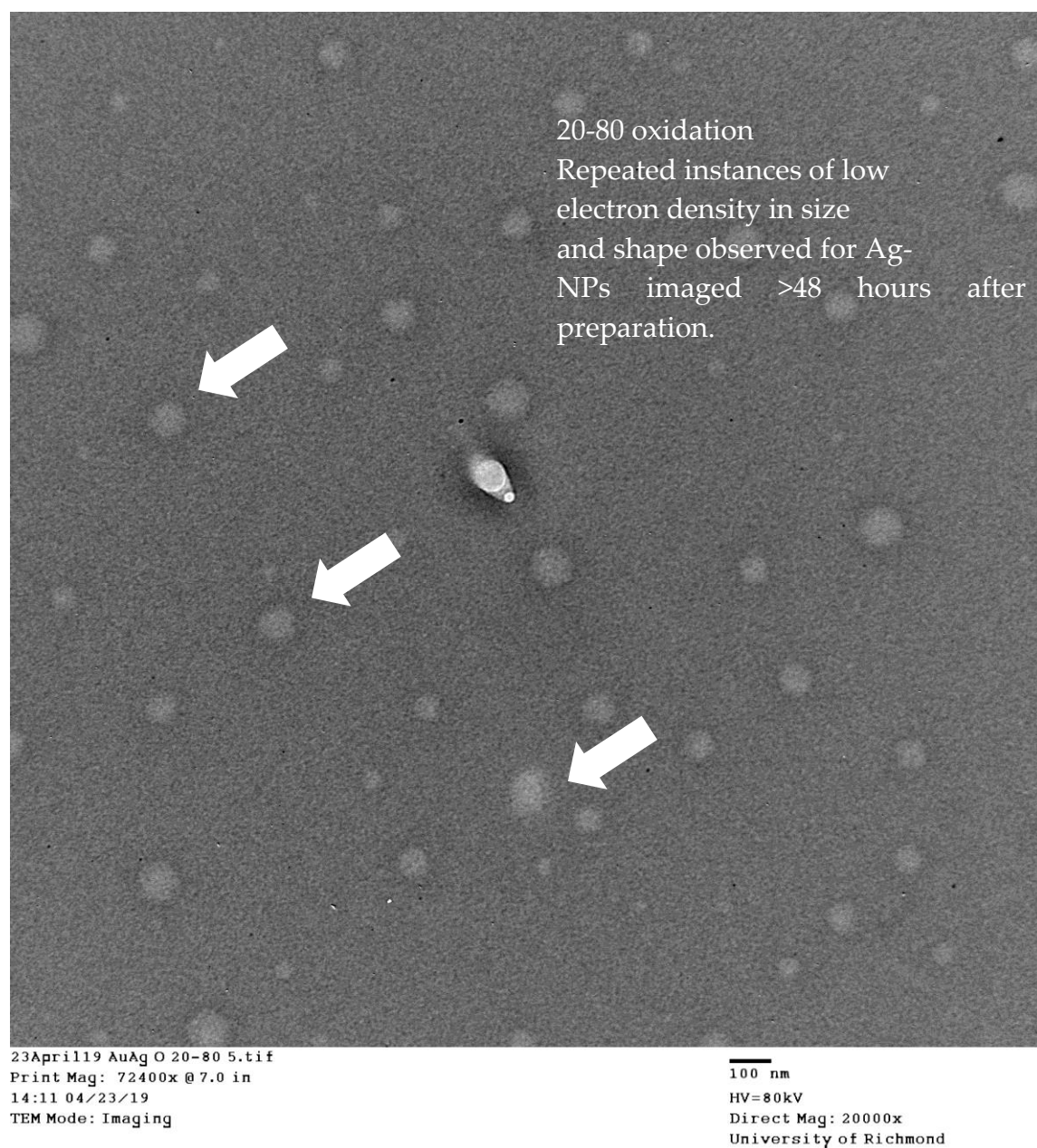


Figure S6. TEM imaging for 20:80 reduction sample showing low electron density holes and the corresponding absence of high electron density Ag NPs for a sample that was not immediately imaged.

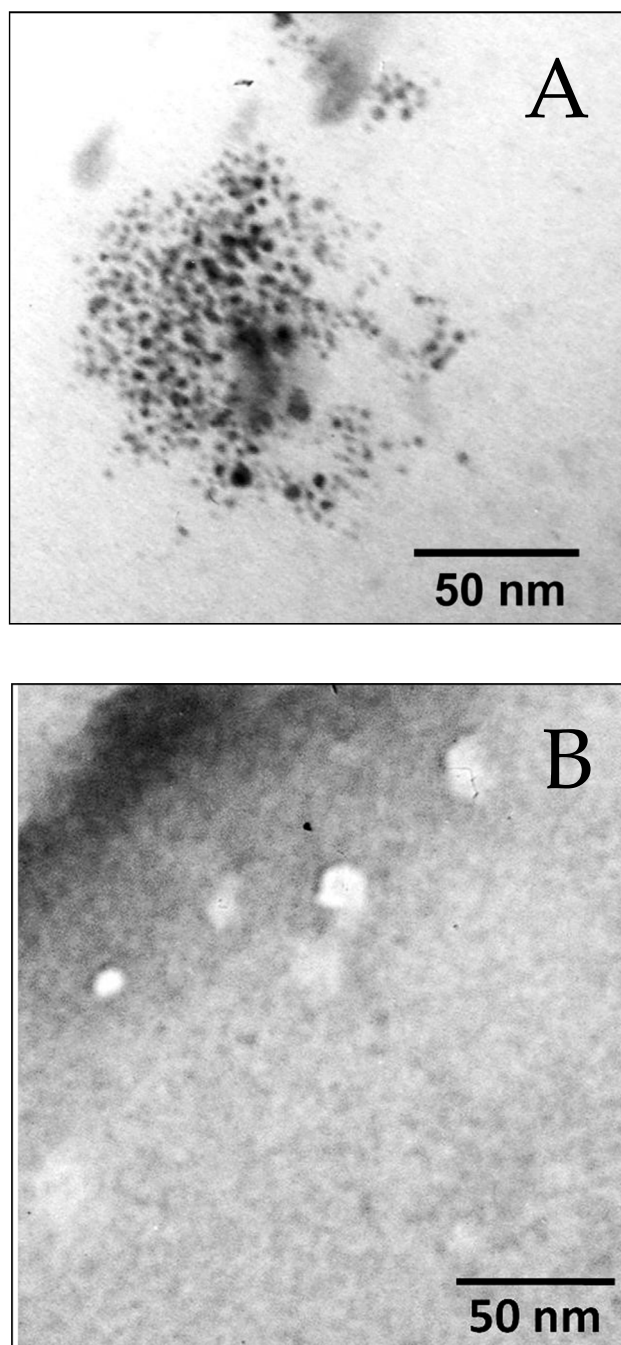


Figure S7. TEM imaging for 0:100 reduction sample (A) as prepared showing presence of Ag-NPs versus (B) the same sample imaged > 48 hours after being prepared and illustrating the absence of Ag-NPs (presence of low electron density holes with same dimensions as previously imaged Ag-NPs).