Supporting Information

Production of Oxidation-Resistant Cu-Based Nanoparticles by Wire Explosion

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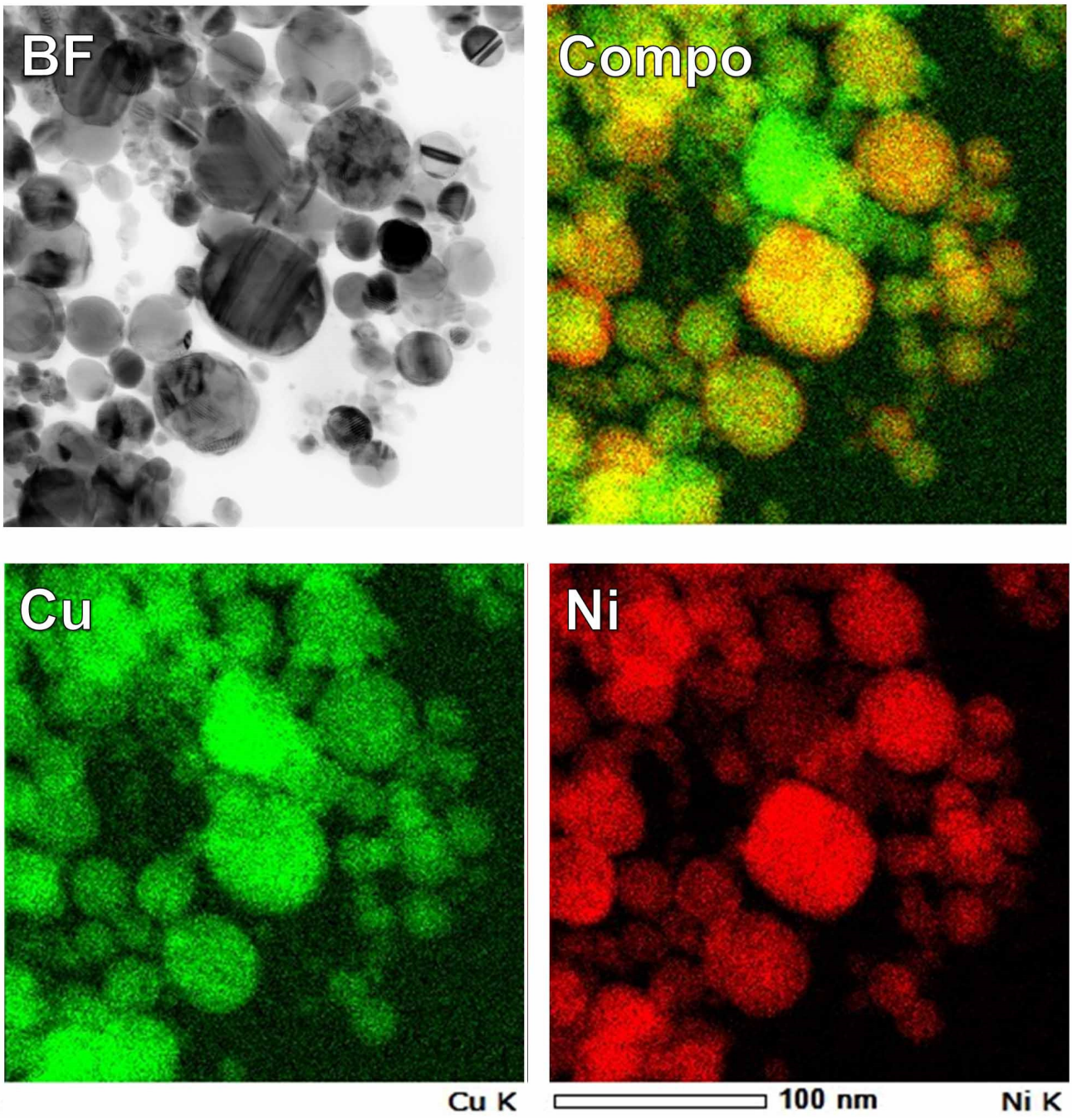

Figure S1. STEM image (bright field, BF) of 30Ni. The corresponding EDX mappings for Cu and Ni elements are also shown. The Compo image is composed of overlapped Cu and Ni mappings.

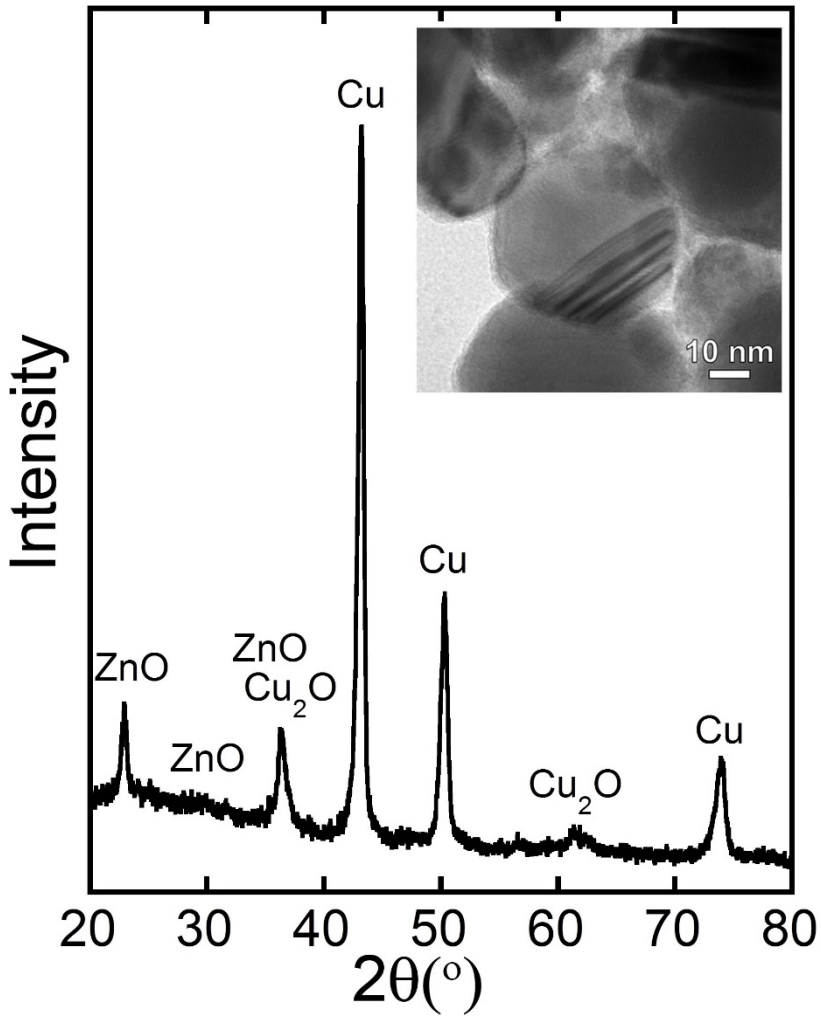

Figure S2. XRD pattern and TEM image of 30Zn NPs prepared by WE in an aqueous solution of 200 mM ascorbic acid.

Table S1. Normalized atomic ratio of oxygen/metal detected by EDX. All samples were measured after corroded at 85 °C, 85% RH for 50 hrs.

Sample	Normalized Oxygen/Metal (at%)
Cu	1.000
1Sn	0.373
5Ag	0.397
5Ni	0.473
30Ni	0.330
30Zn	1.058

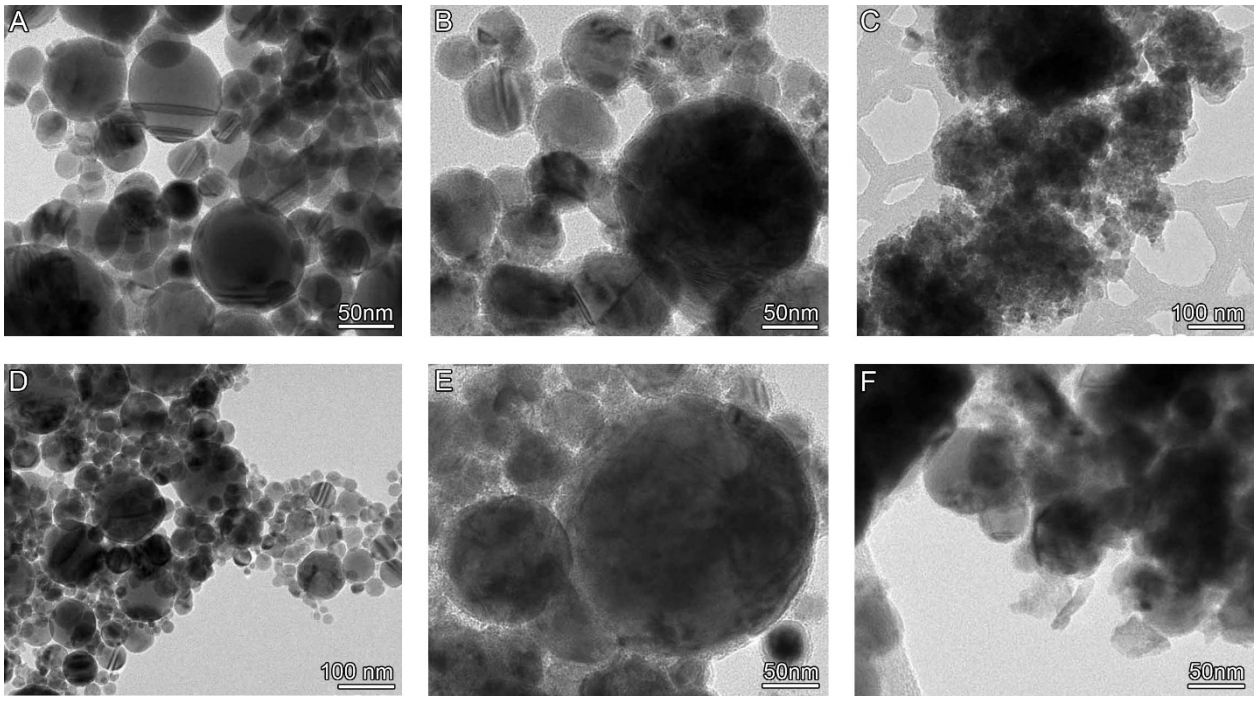

Figure S3. TEM images of (A, B, C) Cu and (D, E, F) 30Ni. (A&D) sintered, (B&E) corroded at 85 °C, 85% RH for 1 hr, (C&F) corroded at 85 °C, 85% RH for 50 hrs.

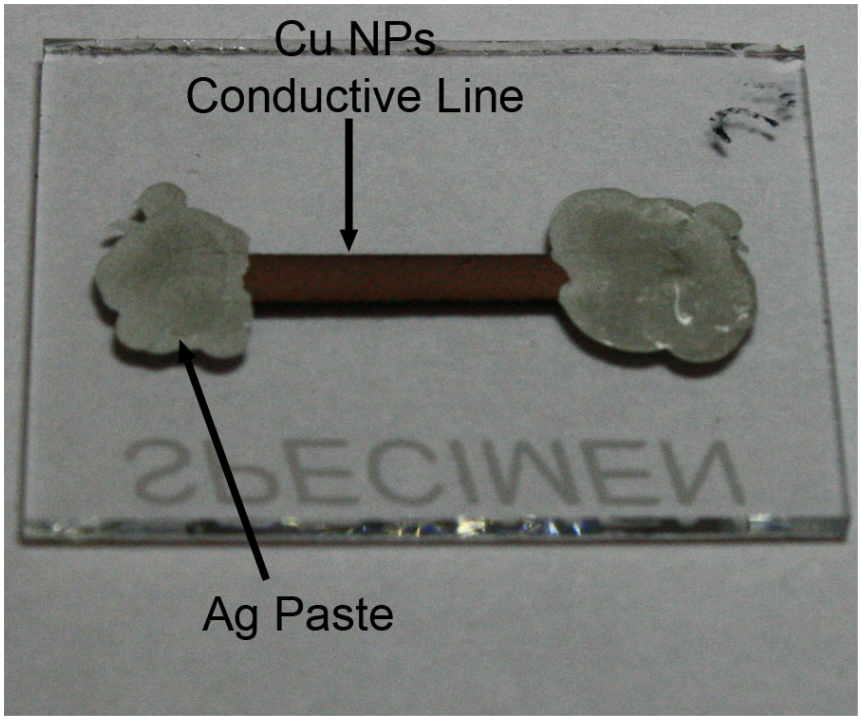

Figure S4. A photograph of a conductive line drawn using Cu NPs prepared by WE in an aqueous solution of 200 mM ascorbic acid. The width, length and thickness of the line were 2, 15 mm and 14.1 μm, respectively.