Supporting Information (SI)

Multiply twinned AgNi alloy nanoparticles as highly active catalyst for multiple reduction and degradation reactions

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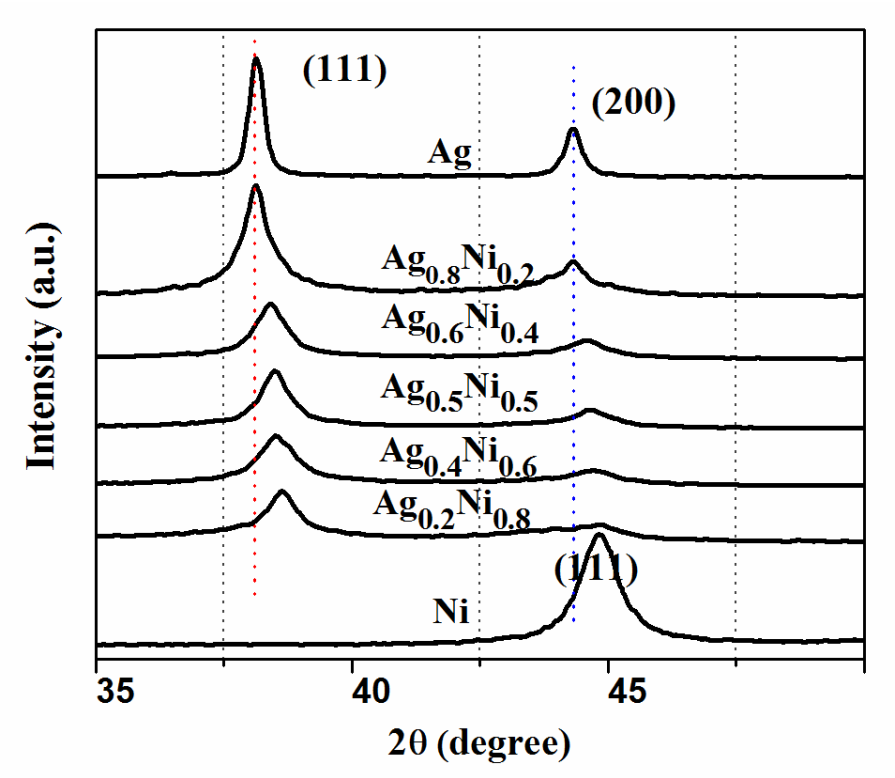

Figure S1. A magnified 2θ range (35-50°) elaborating the peak position shifting and changing of peak intensity with Ag/Ni contents for all the as-synthesized samples.

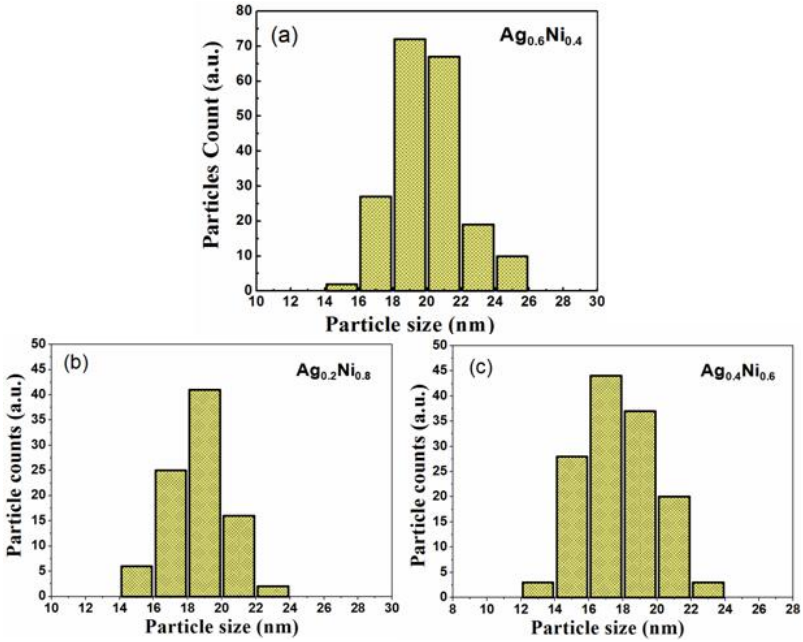

Figure S2. Particle size distribution form TEM micrographs for (a) $Ag_{0.6}Ni_{0.4}$, (b) $Ag_{0.2}Ni_{0.8}$ and (c) $Ag_{0.4}Ni_{0.6}$ alloy nanoparticles.

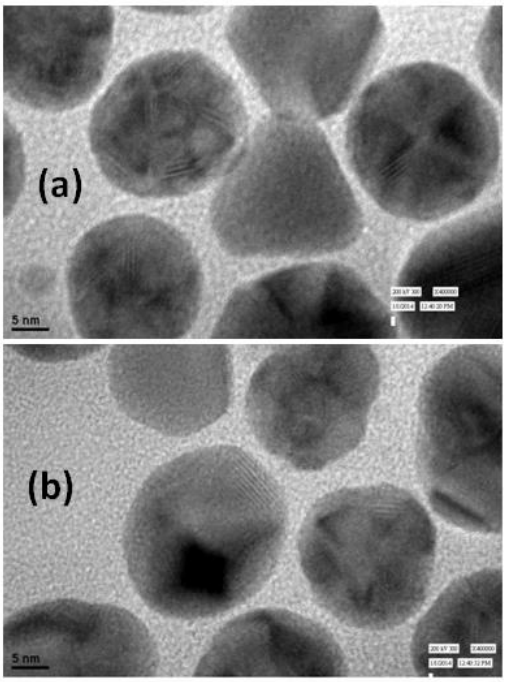

Figure S3. HRTEM images show the presence of twinned nanostructures oriented in different directions in which mainly five crystalline domains separated with twinned boundaries.

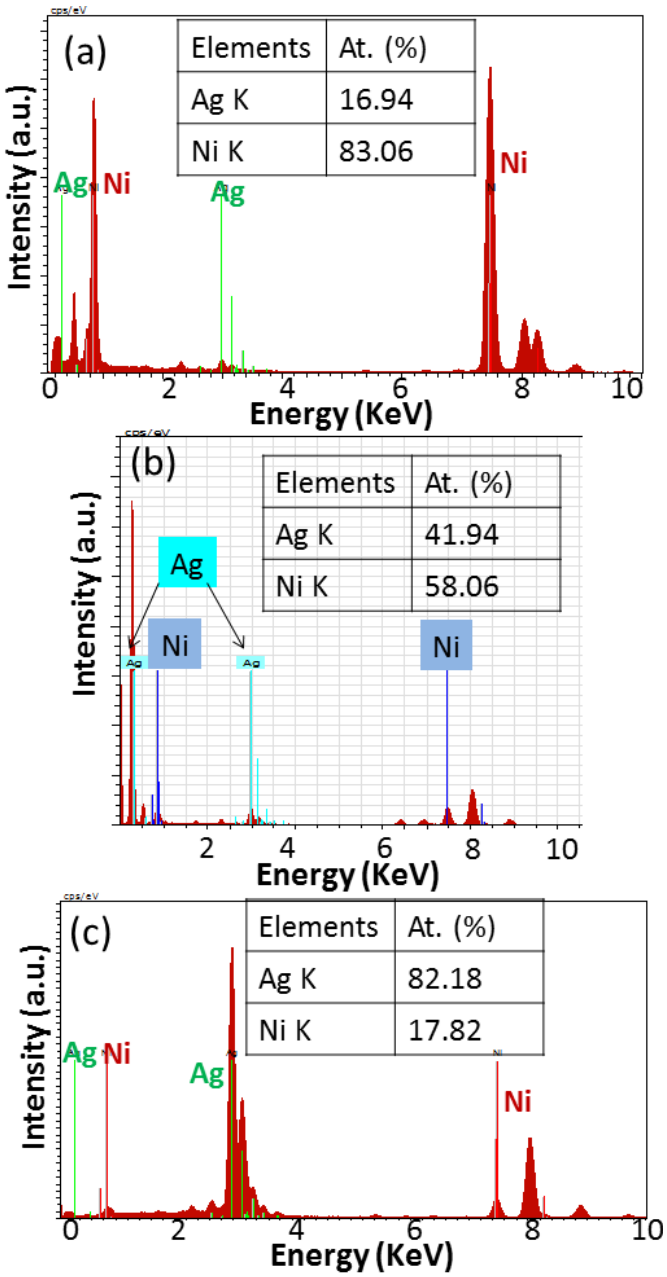

Figure S4. EDAX analysis of (a) $Ag_{0.2}Ni_{0.8}$, (b) $Ag_{0.4}Ni_{0.6}$ and (c) $Ag_{0.8}Ni_{0.2}$ alloy NPs.