Electronic Support Information (ESI)

Bimetallic gold and palladium nanoparticles supported on copper oxide

nanorods for enhanced H₂O₂ catalytic reduction and sensing

Simbongile Sicwetsha,^a Omotayo Adeniyi,^a Philani Mashazi^{a,b,*}

^aDepartment of Chemistry, Rhodes University, P.O. Box 94, Makhanda, 6140, South Africa.

^bInstitute for Nanotechnology Innovation, Rhodes University, P.O. Box 94, Makhanda, 6140,

South Africa.

*Correspondence: p.mashazi@ru.ac.za

Energy dispersive spectroscopy (EDS) was used to investigate the elemental composition of the prepared CuONRs and the gold and palladium supported onto CuONRs. **Figure S1** shows EDS spectra of (a) CuONRs, (b) CuONRs@Au₆NPs, (c) CuONRs@Pd₆NPs, and (d) CuONRs@Au₃Pd₃NPs. The EDS spectrum of CuONRs showed the presence of Cu, O and C. The presence of C emanates from the carbon tape that was used to mount the sample on the stub. The EDS spectra of CuONRs@Au₆NPs, CuONRs@Pd₆NPs and CuONRs@Au₃Pd₃NPs showed additional peaks that are due to Au and Pd nanoparticles. X-ray photoelectron spectroscopy was used for quantitative analysis of the samples.



Figure S1: EDS spectra of (a) CuONRs, (b) CuONRs@Au₆NPs, CuONRs@Pd₆NPs, and (d) CuONRs@Au₃Pd₃NPs.



Figure S2: SEM-EDS elemental mapping of CuONRs@Au₆NPs



Figure S3: SEM-EDS elemental mapping of CuONRs@Pd₆NPs



Figure S4: SEM-EDS elemental mapping of CuONRs@Au₃Pd₃NPs.