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Supporting Information

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Interfacial Growth of Large Area Single-Crystalline Silver Sheets Through Ambient Microdroplets

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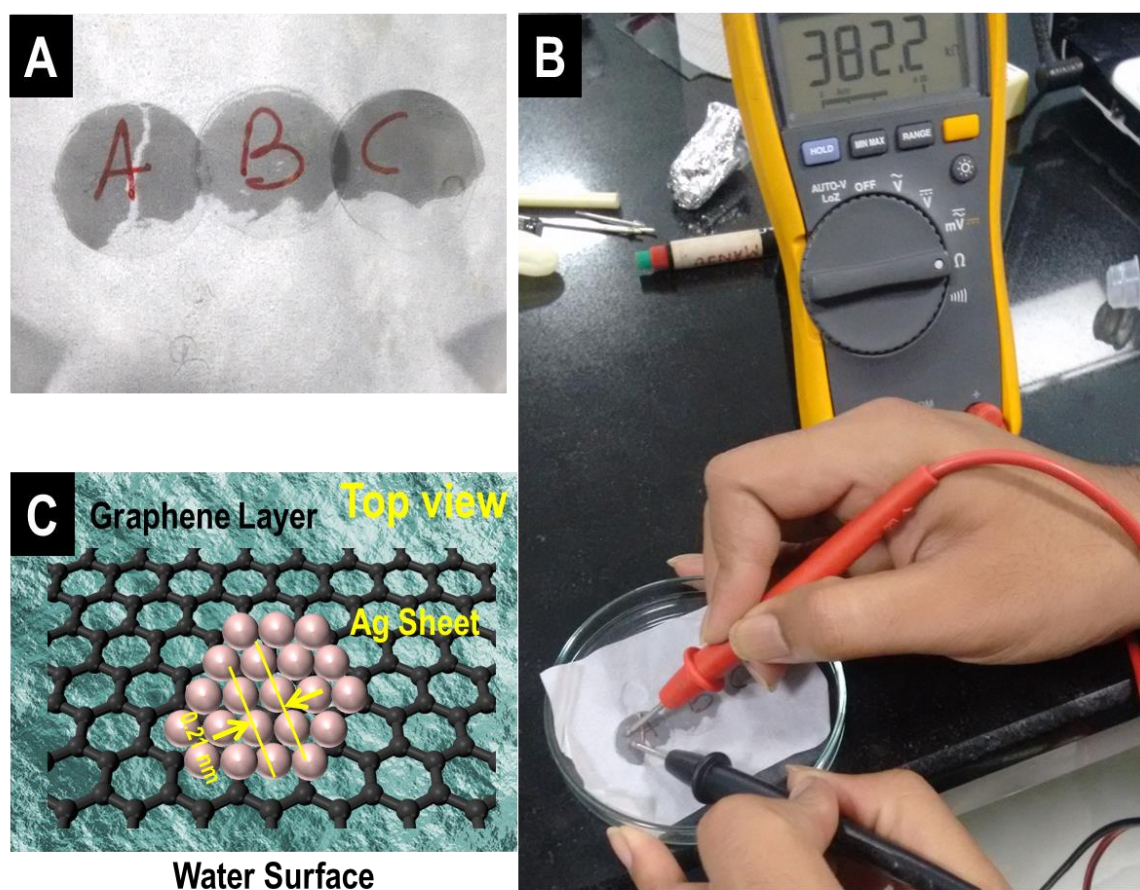


Figure S1. Optical photographs of A) graphene thin films collected on glass cover slips, B) electrical conductivity of the film. C) Schematic representation top view, showing the formation of single crystalline Ag sheet on graphene

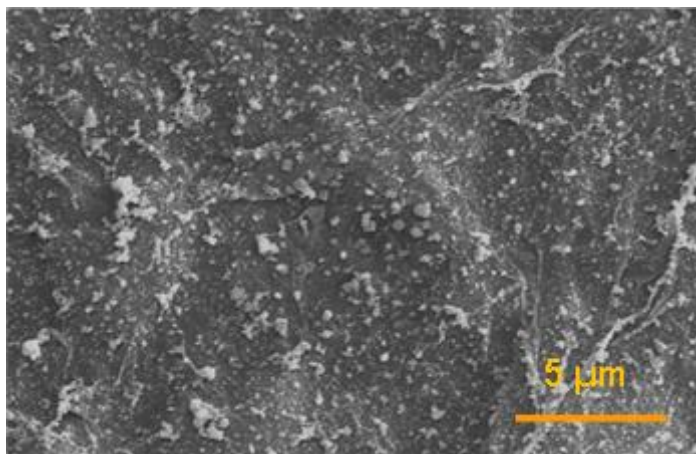


Figure S2. SEM image of ESD of Ag ions on a dried graphene surface.

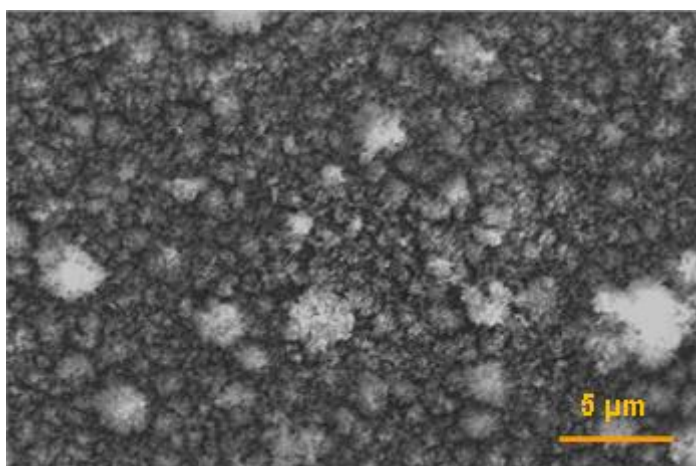


Figure S3. SEM image of ESD of Ag ions on a graphene film formed by evaporation of the solvent.

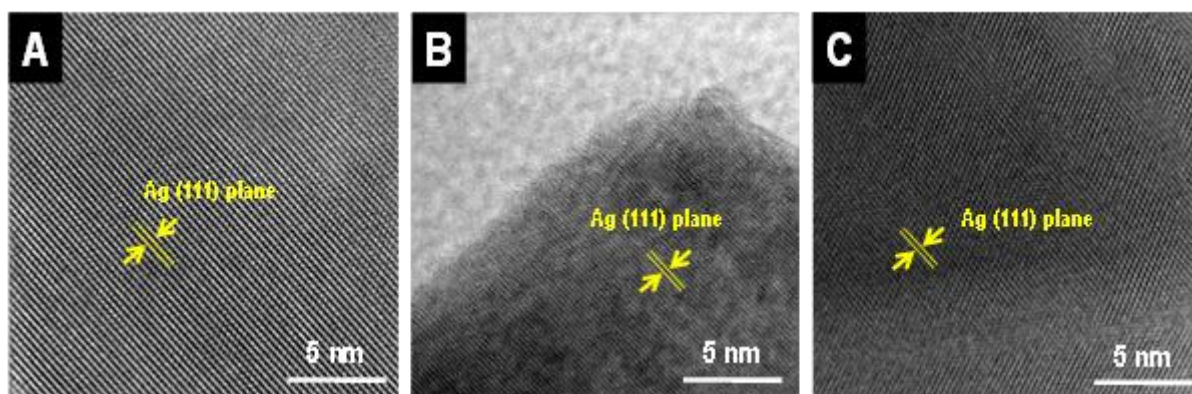


Figure S4. HRTEM images collected from different points of a Ag sheet showing Ag(111) lattice planes.

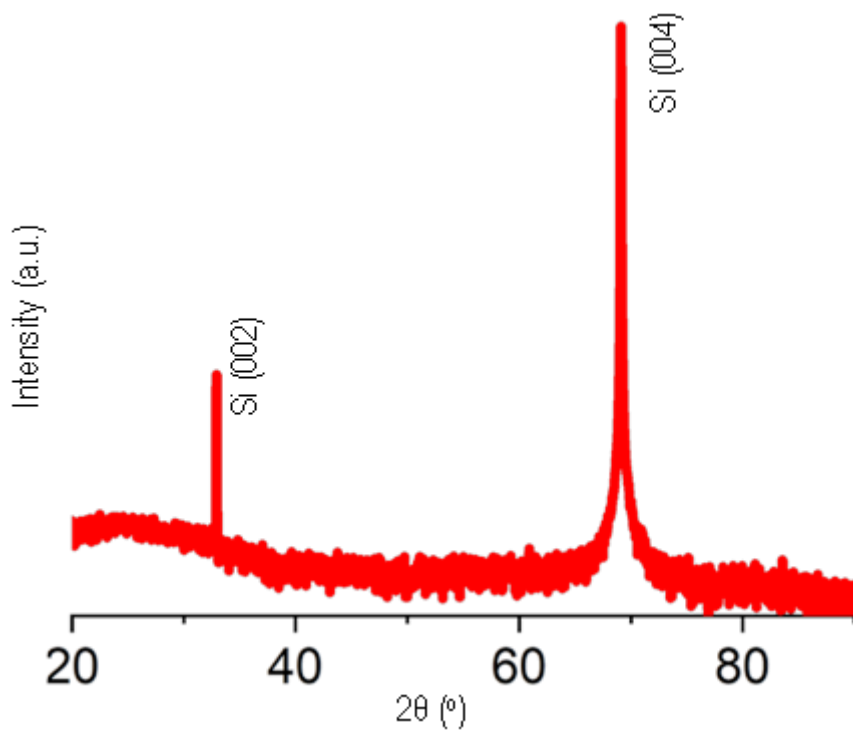


Figure S5. XRD spectrum of the graphene thin film-coated Si-wafer substrate for reference.

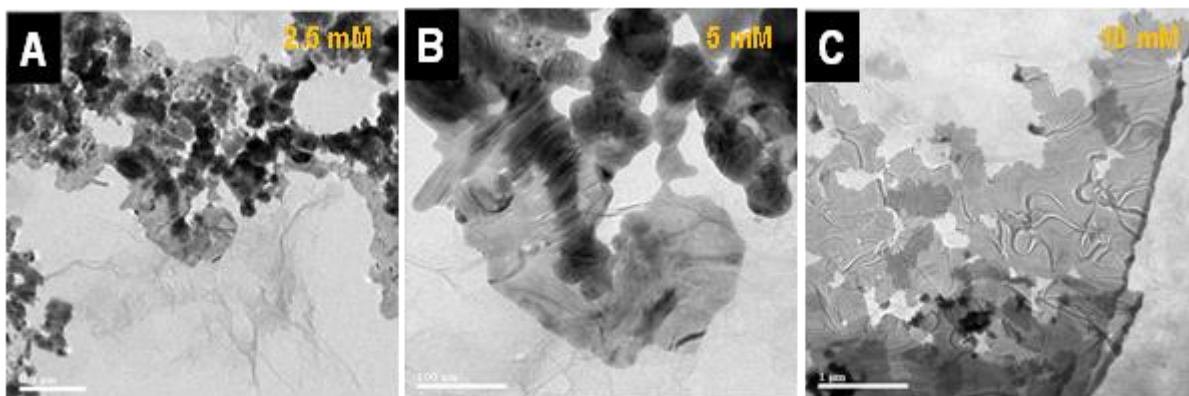


Figure S6. TEM images of Ag sheet synthesized using different precursor concentrations, A) 2.5 mM, B) 5 mM, and C) 10 mM.

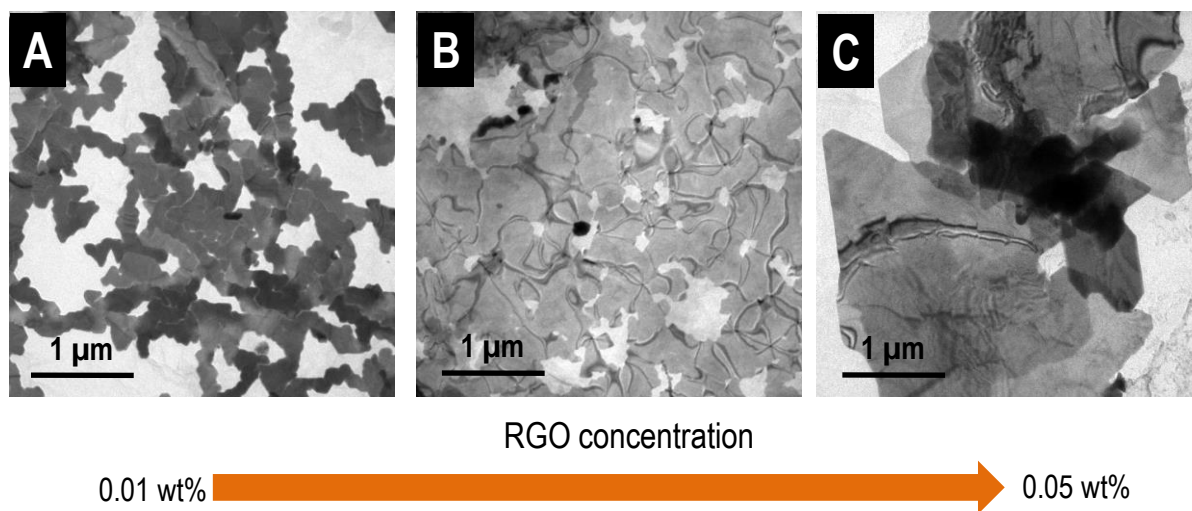


Figure S7. TEM images of Ag sheet formed on RGO. From A) to C) concentration of the RGO suspension increases.

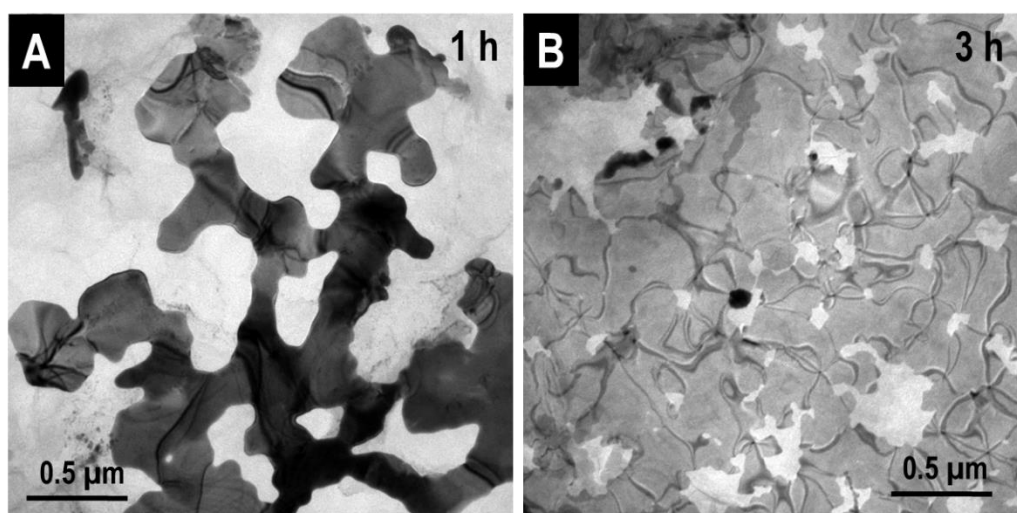


Figure S8. TEM images of the Ag sheet formed on RGO suspension at the different time of deposition.

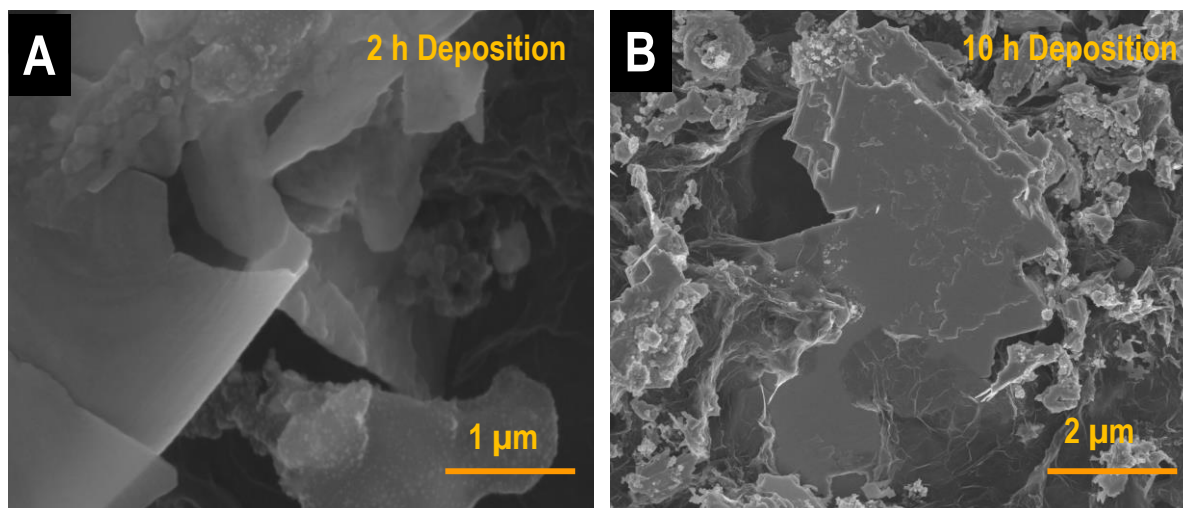


Figure S9. FESEM images of Ag sheets formed after A) 2h deposition, and B) 10 h deposition, showing clear difference in their thickness.

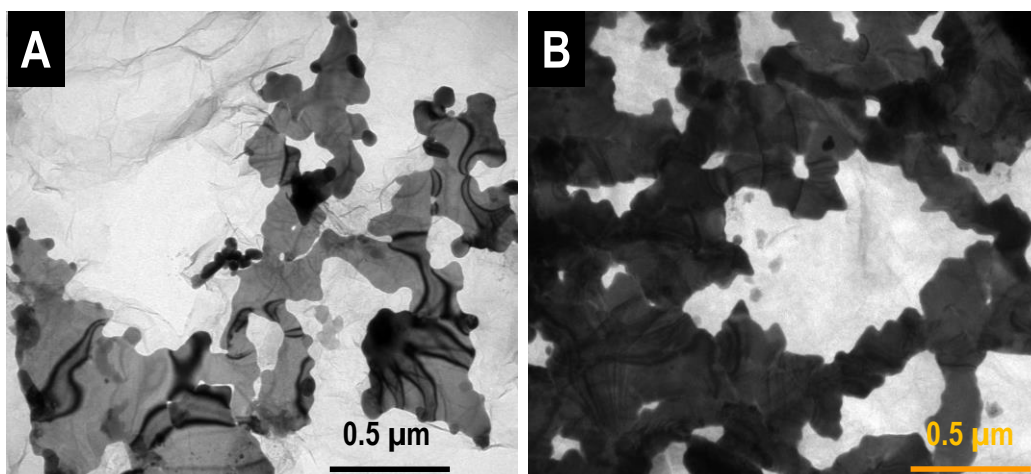


Figure S10. TEM Images of the Ag sheets formed with different deposition currents: A) 50 nA, and B) 100 nA.

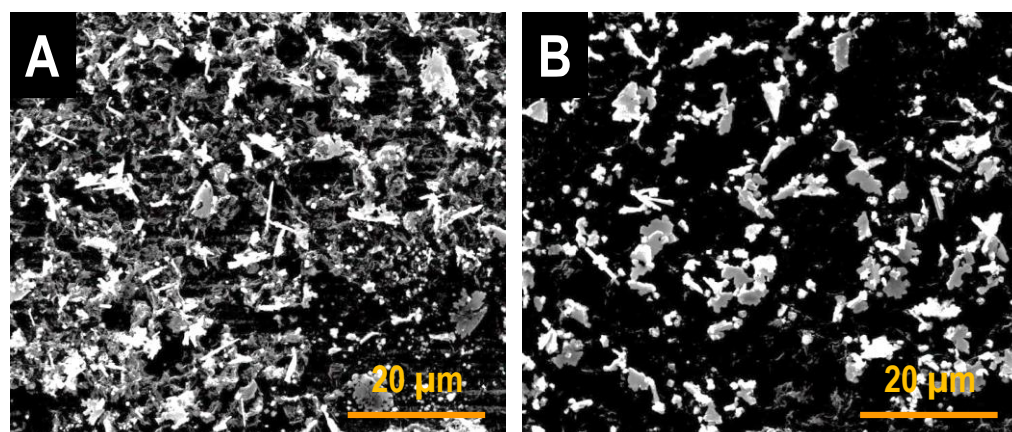


Figure S11. SEM images of Ag sheets synthesized from different precursor salts: A) AgClO_4 , and B) AgNO_3 .

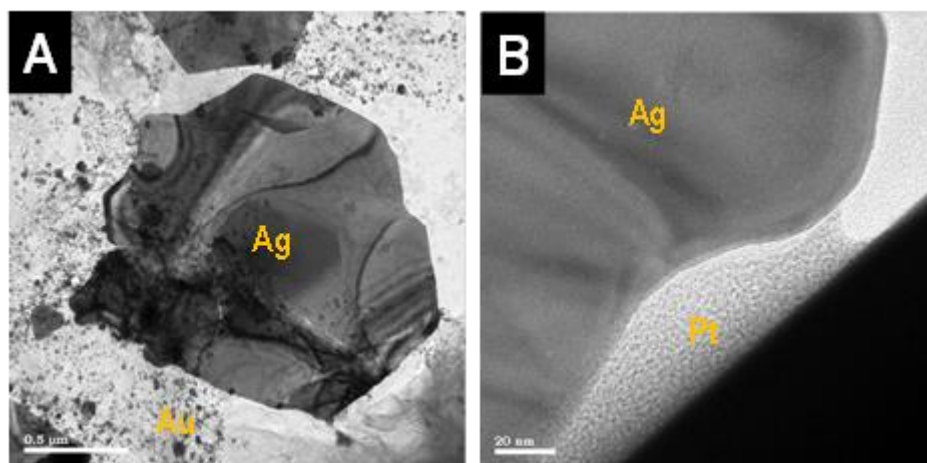


Figure S12. TEM images collected from the ESD samples of mixed precursor of noble metal salts, A) silver-gold, and B) silver-platinum.

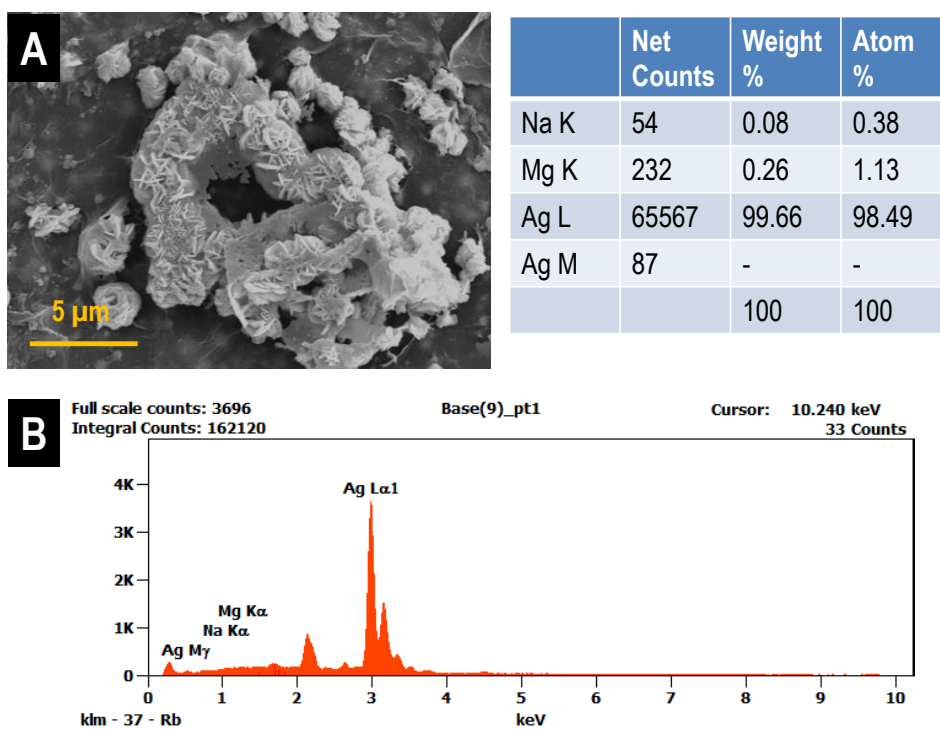


Figure S13. A) SEM image of the Ag sheets formed after ESD of mixed precursor solution of silver acetate, sodium acetate, and magnesium acetate. B) Point EDS spectrum showing that the sheets are made of 100% silver. Atomic percentages are presented in the inset.

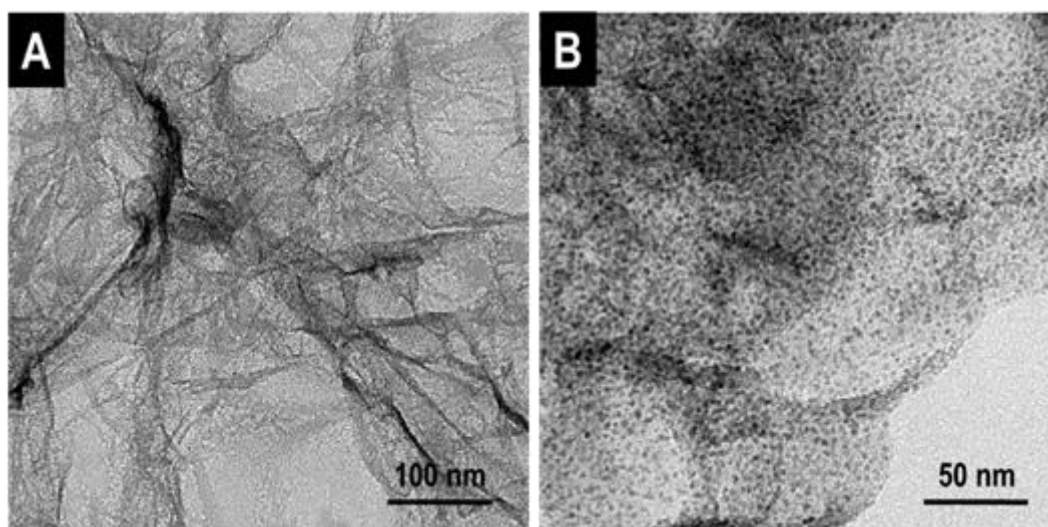


Figure S14. TEM image of Pd nanoparticles formed after ESD of Pd on aqueous suspension of RGO.

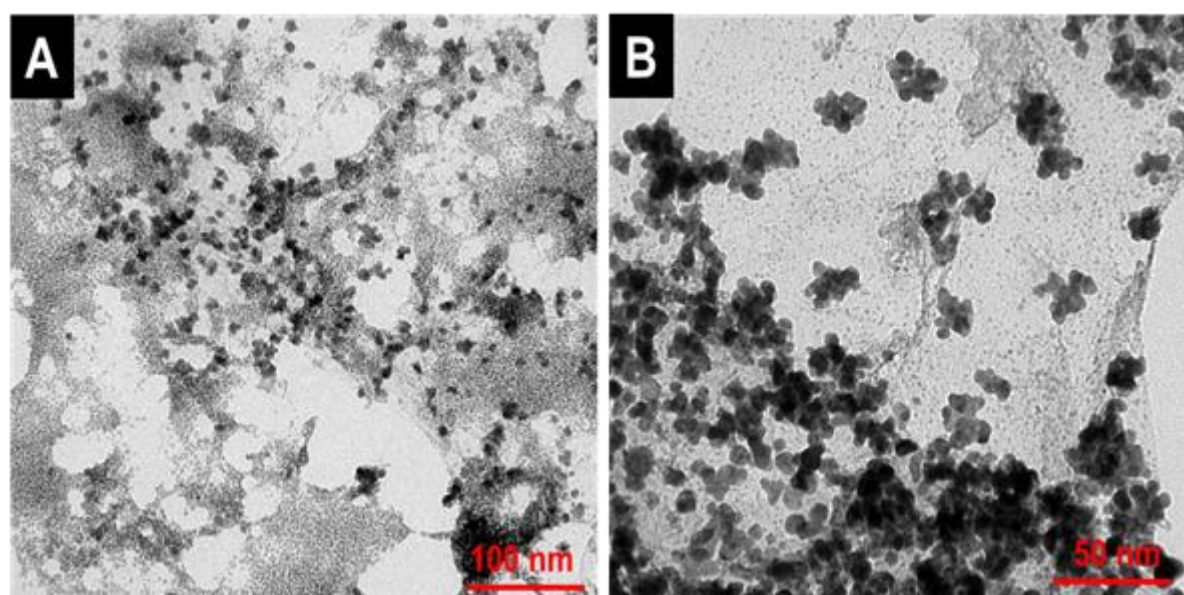


Figure S15. TEM image of Au nanoparticles formed after ESD of Au on aqueous suspension of RGO.

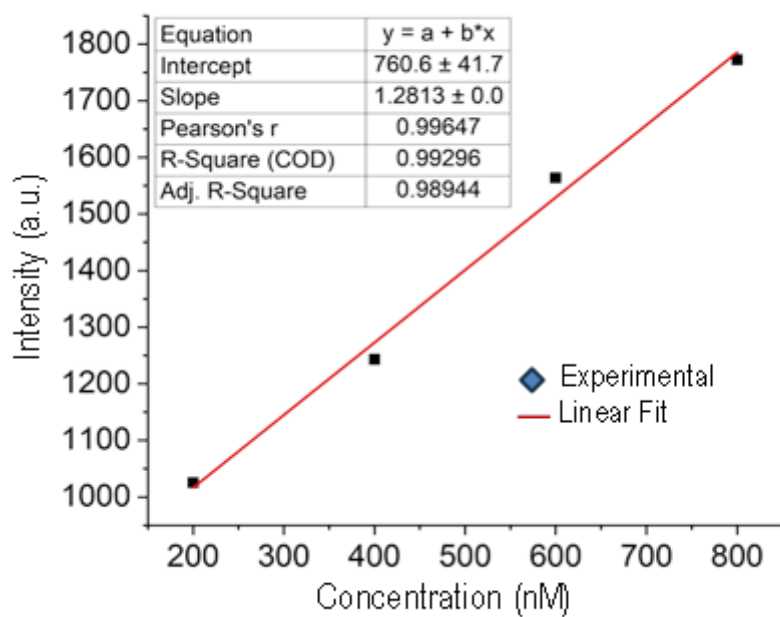


Figure S16. Concentration vs SERS intensity (@1625 cm⁻¹) plot for MB within the concentration range 200-800 nM.

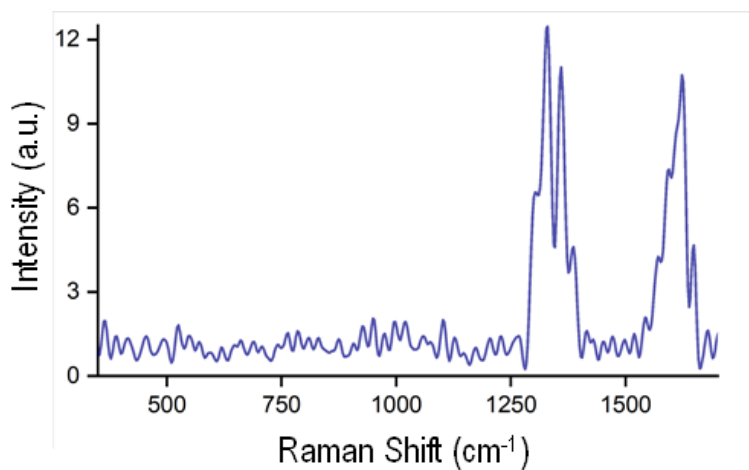


Figure S17. Raman spectrum collected using 0.08 μ M methylene blue on graphene surface.