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## Antibody Modification of CuNp Prepared by Exploding Wire Method and Cyclic Voltammetry Studies

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In our current work Copper Nanoparticles (CuNPs) were synthesized by EEW (Electro Explosion of Wire) technique<sup>1</sup> where a Cu wire of 0.5 micron in diameter was exploded on a Cu plate, triggered by high current densities in the wire. After explosion the particles were collected, characterized and bio-functionalized with antibodies through surface adsorption technique. The CuNPs, just synthesized by EEW were found to be very active and the antibodies were easily conjugated to the particles. The binding was confirmed by DLS, Zeta and then Fluorescence measurement. Cyclic Voltammetry studies of the immunoreaction (between antibody functionalized Cu NP and the respective antigen) was monitored in solution. Nanoparticles prepared by physical or chemical method have limited production rates but EEW technique is currently being explored to synthesized metallic nanoparticles in high quantity and for various applications.