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Development of Novel Nanomaterials Research Project at a Two-year College DIANA MIKHAIL, JOSE OROZCO, MELISSA RAMOS, SHAWN SANDERS, SLAVA BEKKER, SEWAN FAN, Hartnell Comm Coll — At Hartnell College in California, we are developing an undergraduate research program in the synthesis and characterization of metallic nanoparticles and semiconducting quantum nanomaterials. We have synthesized silver nanoparticles using the Turkevich method. This method utilizes sodium citrate to reduce the silver ions from a silver nitrate solution. We are in the process of trying to duplicate the synthesis with gold nanoparticles and characterize them as well. Due to recent reports on the prospect of bandgap engineering of lead halide perovskite nanoparticles, we plan to synthesize methylammonium lead halide compounds and study their notable features. To characterize the resultant nanoparticles, material science techniques such as UV-visible absorption spectroscopy, scanning electron microscopy and atomic force microscopy would be used. At this conference, our synthetic and spectroscopic results would be presented.

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