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Enhanced electrochemical dissolution of Ag nanoparticles in the presence of Pt nanoparticles

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Spherical PVP-coated Ag (10 nm) and Pt (3 nm) NPs were wet-chemically synthesized and mixed as aqueous dispersion with different mass ratios of Ag:Pt. It was shown that the dissolution of Ag NPs was strongly enhanced by the presence of Pt NPs in chloride-containing aqueous dispersion. This behavior was confirmed by PXRD and TEM (Fig. 1). At the same time, only a slow dissolution of Ag NPs in presence of Pt NPs was detected in water or ammonium acetate or phosphate-buffered saline solutions.

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