

The effect of concentration of extractants and pH of solutions on extraction of Pd ions in Pd/Sn colloid solution

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Noble metal like a Pd should be reused because of their rarity on earth and the price of it. Pd ions are used as a catalyst for electroless plating process. The mixed PdCl₂/SnCl₂ solution(Pd/Sn colloid particle) containing hydrochloric acid is most commonly used in electroless plating to make a nonmetallic substrate surface catalytically active to initiate the metal deposition. PdCl₂/SnCl₂ solution has a Pd-Sn alloy core with a stabilizing layer of adsorbed Sn(+2) ions. Sn(+2) ions reduce a Pd ion and make a stabilizing layer in the surface of Pd/Sn particle. Pd ions are extracted by Tri-n-octylphosphine oxide and Thenoyltrifluoroacetone. This study investigates the effect of concentration of extractants and pH of solutions on extraction of Pd ions.