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Recovery of silver from electronic waste

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The paper deals with recovery of silver from solution after leaching of electronic waste. Precipitation experiments were performed in 0.1 M thiosulphate solution where the silver concentration was 4.7 μ g/ml and in 0.5 M thiosulphate with a silver concentration of 5.98 μg/ml. As precipitating agents were chosen: NaBH4, Na2S2O4, KI, NaCl and Na2S. The maximum efficiency of precipitation was 100 % specifically in two cases using NaBH4 in a 0.1 M solution at 60 °C and precipitation with NaCl with the addition of 2 ml H2O2 also in a 0.1 M solution at 20 °C. Precipitation efficiency above 95 % was achieved with precipitation at 20 °C, using NaCl as a precipitant with the addition of 2 ml H2O2 in 0.5 M thiosulphate, Na2S in a 0.5 M solution and using NaBH4 in 0.1 M solution.

Speaker Biography

Dusan Orac works as an associate professor and co-director at Institute of Recycling Technologies, Faculty of Materials, Metallurgy and Recycling, Technical University of Kosice. He completed his PhD in 2010 a habilitation in 2014 at Technical University of Kosice, Slovakia in field Environmental Engineering. His scientific and research activities are focused on treatment of industrial as well as municipal wastes. His educational activities are focused on secondary raw materials, hydrometallurgical processes and production of precious and rare metals. He is a co-author of 22 scientific international publications and has more than 100 citations mostly in CC journals and his H-index is 5.

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