Title of the Innovation: "A method of recovering copper(II) from acidic solutions, especially from waste and digestive solutions ", Polish patent application no. P.431208 (2019). Polish patent PL 240363 (2022). Patent protection for an invention: 2022.03.21 WUP 03/2021

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Abstract:

The present invention relates to a method of recovering copper(II) ions from acidic solutions, in particular from waste and digestive solutions. The essence of the invention is the method of solvent extraction of copper(II) ions using 2,6-bis(4-methoxybenzoyl)-diaminopyridine as the extractant. This innovation enables the removal of about 99% of the copper(II) ions from the acidic solutions using a 0.001 M solution of the tested extractant in chloroform. The innovation enables the recovery of copper(II) ions from acidic solutions, post-production waste, groundwater, waste, and digestive solutions. The main advantages are low production costs of the obtained extractant, the possibility of regeneration and reuse of the extractant in the process and high process efficiency. This innovation enables the reduction of the amount of toxic wastewater generated in the company, and also company's savings in the case of re-use of the raw material recovered from waste and/or significant reduction of costs related to the storage and/or disposal of waste. Moreover, the invention described in the patent number PL 240363 (2022) has a positive impact on the protection of the natural environment, which is very important from the point of view of the sustainable development of the country.

Images

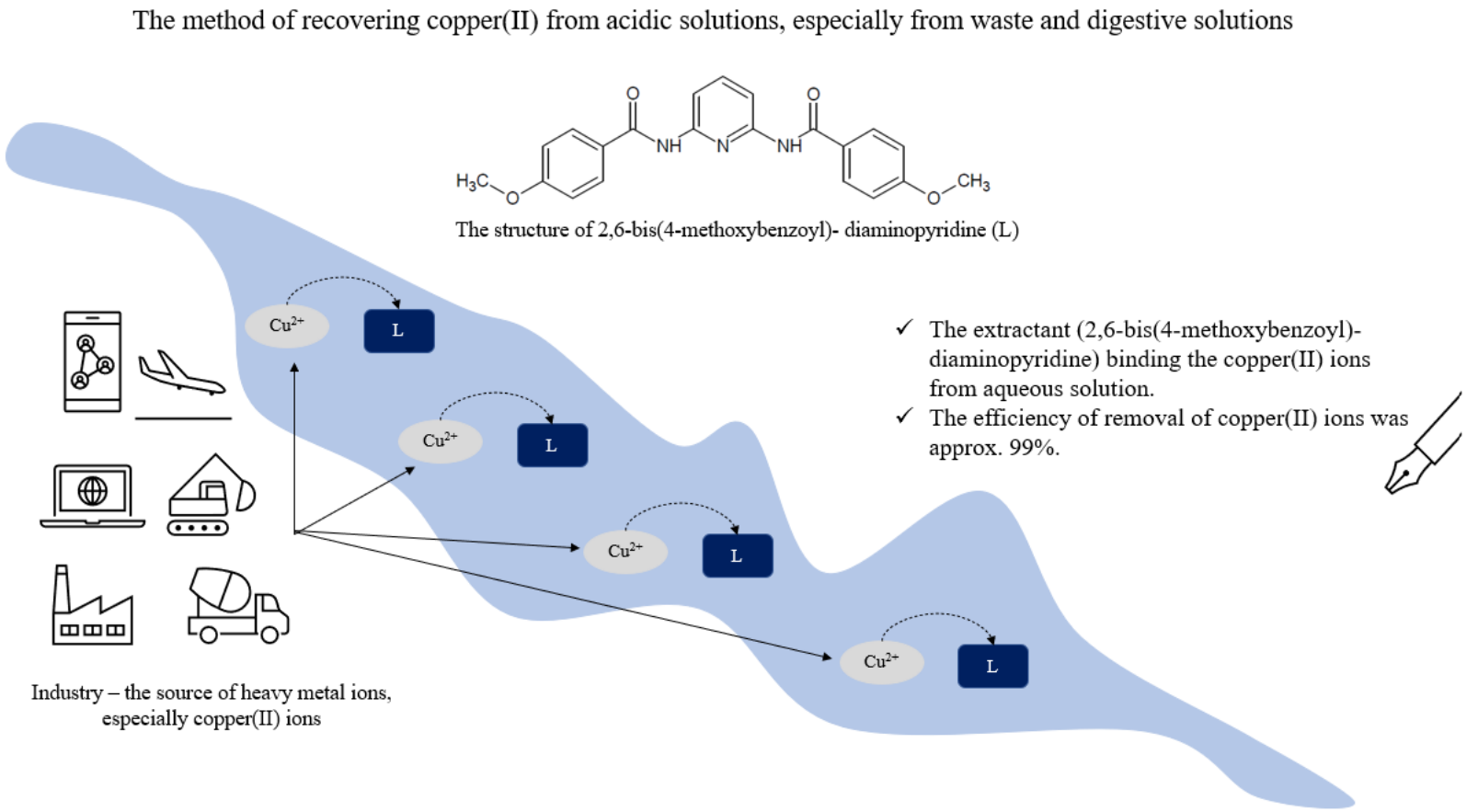

Figure 1. "The method of recovering copper(II) from acidic solutions, especially from waste and digestive solutions"