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RECOVERY OF TANTALUM FROM DIFFERENT RESOURCES

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Abstract
Tantalum is a chemical element with important properties. It is used in industry and its numerous branches for instance in jewelry and watchmaking products. As a result, it is not uncommon for this metal to become an object of interest for a variety of buyers. After it has been bought back from the customers, tantalum can be recycled and, as a result, its full content can be retrieved. In economy, tantalum has become a 'technology-critical element' which is increasingly used in new technologies. This has led to a need to evaluate potential environmental impacts, which, in turn, requires knowledge of its concentration in the natural and industrial environment. This paper will present secondary sources of tantalum extraction and recycling, which makes it possible to limit the use of this raw material from natural sources, which are in increasing exhaustion. The analysis also includes the case study of the old Penouta mine, and processing of tailings from waste-rock heaps and ponds on these area. It is located in the innermost part of the Iberian Variscan Belt in Galicia in northwest Spain where two main formations crop out: the Viana do Bolo Series (high-grade metamorphic rocks) and the Ollo de Sapo Formation.

Keywords: **Tantalum; Recycling; Critical raw material; Mine waste; Tailings; Capacitors.**