

**METHODOLOGY FOR RECYCLING RU AND RU-ALLOY DEPOSITION TARGETS &
TARGETS MADE OF RECYCLED RU AND RU-BASED ALLOY POWDERS**

Abstract of the Disclosure

[0036] A method of recycling ruthenium (Ru) and Ru-based alloys comprises steps of:

5 providing a solid body of Ru or a Ru-based alloy; segmenting the body to form a particulate material; removing contaminants, including Fe, from the particulate material; reducing the sizes of the particulate material to form a powder material; removing contaminants, including Fe, from the powder material; reducing oxygen content of the powder material to below a predetermined level to form a purified powder material; and removing particles greater than a predetermined
10 size from the purified powder material. The purified powder material may be utilized for forming deposition sources, e.g., sputtering targets.

Figure 1