

ABSTRACT
**PROCESS FOR MANUFACTURING POWDER MATERIALS
THROUGH THE CONTROLLED ATOMS EJECTION FROM A TARGET
MATERIAL AND SUBSEQUENT DEPOSITION ON A POWDER BASE
MATERIAL**

The present invention discloses a process for manufacturing new powder materials by controlled atom ejection. In this process, the material to be deposited (target material) may be selected from any element of the periodic table or from a combination of at least two such elements. The material receiving the deposition, referred to as the base material or substrate, may be selected from polymeric, metallic, semiconductor, ceramic, molecular sieve, perovskite, MOF, carbonaceous materials, or any type or class of powder material having a vapor pressure lower than 10^{-1} mbar. The process taught by the present invention describes means for planning and achieving different coating structures on the base material (substrate) through the definition and control of production parameters. As a result, a plurality of new materials with new properties, as well as predefined properties, can be obtained.

[Figure 4]