

Supporting Information 1

Scheme illustrating the different strategies to grow nanoparticles with controlled chemical composition and structure

Daniel Llamosa Pérez, Manuel Ruano Díaz, Lidia Martínez, Alvaro Mayoral, Elisa Roman, Mar García-Hernández and Yves Huttel.

The nanoparticles are generated using a so-called Multiple Ion Cluster Source. The generation process is illustrated in figure S1.1 where the 3 individual magnetrons are displayed together with their translators that allow the translation of the magnetrons inside the ultra-high vacuum aggregation zone.

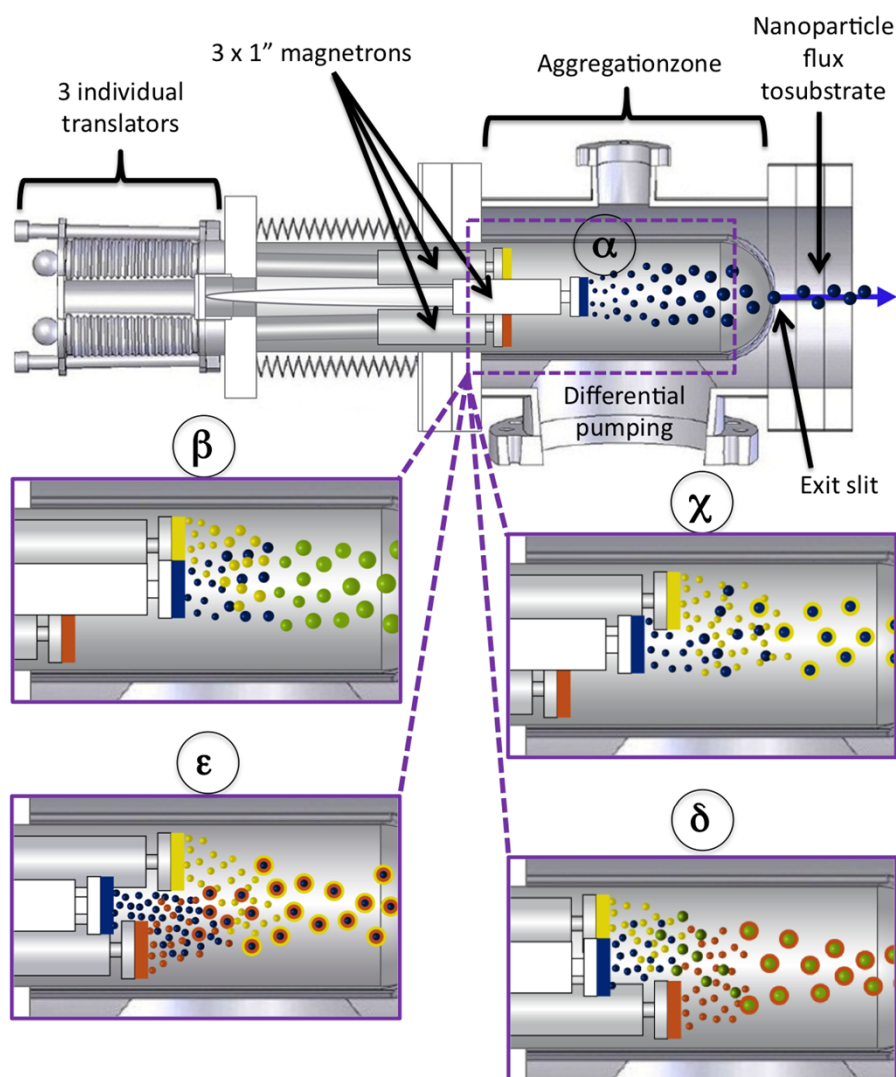


Figure S1.1. Schematic representation of the possible configurations of the magnetrons inside the Multiple Ion Cluster Source that allow the generation of nanoparticles of different types.

The different strategies to grow complex NPs are also depicted. Nanoparticles of type α are those generated by a single magnetron while nanoparticles of type β are alloys formed by the elements generated by 2 or 3 magnetrons. χ , ε and δ nanoparticles are core@shell NPs that can be formed by the elements of 2 magnetrons (χ) or 3 elements (ε , δ). ε NPs are formed by a core and 2 shells while NPs of type δ are formed by core (shell) resulting from the combination of the elements of 2 magnetrons and a shell (core) from the third magnetron.