

Homogenous Granulated Metal Based And Metal-Ceramic Based Powders

Abstract of the Disclosure

[0069] A method of making a homogeneous granulated metal-based powder, comprises steps of: providing preselected amounts of at least one metal element or metal alloy, at least one ceramic compound, and/or at least one non-metallic element; forming a homogeneous slurry/suspension or wet mixture comprising the preselected amounts of metal element(s) and/or metal alloys, ceramic compound(s), and/or non-metallic element(s), a liquid phase comprising at least one liquid, and at least one binder material; drying the slurry/suspension or mixture to remove at least a portion of the liquid phase and form a powder mixture comprising partially or completely dried granules; and subjecting the granules to a thermal de-binder process for effecting: additional removal of any remaining liquid phase, if necessary; removal of the at least one binder material; reduction of carbon content; reduction of oxygen on the surfaces or interior of the metal or metal alloy phases in the granules; and optional partial sintering for strengthening for withstanding subsequent processing. The resultant granules are useful in fabricating magnetic sputtering targets employed in the manufacture of magnetic data/information storage and retrieval media.