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## ABSTRACT

5 The present invention discloses a process for producing nano-powders and  
powders of nano-particle loose aggregate, which comprises: (a) providing at least  
two reactant solutions A and B capable of rapidly reacting to form deposits; (b)  
supplying the at least two reactant solutions A and B at least at the reaction  
temperature into a mixing and reaction precipitator respectively, in which mixing  
reaction and precipitation are continuously carried out in sequence, the mixing and  
10 reaction precipitator being selected from at least one of a tubular ejection mixing  
reactor, a tubular static mixing reactor and an atomization mixing reactor; and (c)  
treating the deposit-containing slurry continuously discharged from the mixing  
reaction precipitator. The present process makes it possible to control the size of the  
nano-particles, produces particles uniform in size, good in dispersibility and high in  
15 yield, while being simple and saving energy. The process can be used to produce  
nano-powders of nano-particle aggregates of various kind of metals, oxides,  
hydroxides, salts, phosphor compounds, sulphur compounds, organic compounds,  
and inorganic organic compounds.

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