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(54) **NANOPARTICLE-STABILIZED IMMISCIBLE ALLOYS**

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See application file for complete search history.

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(21) Appl. No.: **13/669,636**

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(65) **Prior Publication Data**

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(52) **U.S. Cl.**

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(57)

ABSTRACT

Solid immiscible alloys and methods for making the solid immiscible alloys are provided. The microstructure of the immiscible alloys is characterized by a minority phase comprising a plurality of particles of an inorganic material dispersed in a majority phase comprising a continuous matrix of another inorganic material. The methods utilize nanoparticles to control both the collisional growth and the diffusional growth of the minority phase particles in the matrix during the formation of the alloy microstructure.

(58) **Field of Classification Search**

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18 Claims, 10 Drawing Sheets

