

Co - YSZ Nanocomposites for Ultra High Density Information Storage Media

Disclosure Number

200902340

Technology Summary

The present invention comprises structurally engineered, epitaxial, self-assembled ferromagnetic Cobalt – yttria stabilized zirconia nanocomposites. The nanocomposites are made by depositing starting materials on a substrate (such as silicon) by a special technique to form least one nanostructure selected from the group comprising nanodots, thin nanorods, and thick nanorods, which introduce different properties into the nanocomposites. Structures made in accordance with the present invention are useful for making ultrahigh density data storage devices for next-generation technology. Such devices could approach one terabit per square inch at room temperature.

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