

Method of Making Controlled Morphology Metal-Oxides

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Technology Summary

Metal oxide materials have been widely utilized in various applications including transparent electronics, smart windows, high-density magnetic memory, and coatings. However, low-cost, large scale preparation of metal oxide particles and films is still a tremendous challenge, and poses significant market opportunities. The present invention comprises a simple and straightforward process that provides a pathway to make metal oxide particles with well-defined morphology (octahedral nanocrystals, nanobelts, nanospheres and nanowires). The well-defined morphology provides unique advantages in specific applications. The real breadth of the invention is the ability to make industrial size quantities (grams and kilograms) in a matter of hours, and the manufacturing costs are significantly less expensive than any other competing technique currently available in the market. This low-cost process technology has been demonstrated in a lab scale

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