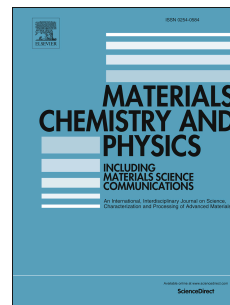


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Defect states and room temperature ferromagnetism in cerium oxide nanopowders prepared by decomposition of Ce-propionate

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Cerium oxide nanopowders were produced by decomposition of Ce-propionate

All samples show RTFM and a broad defect-related photoluminescence emission

Sources for defects/oxygen vacancies potential to induce RTFM were identified

RTFM was improved by annealing the nanoceria containing $\text{Ce}_2\text{O}_2\text{CO}_3$ traces

Decomposition of $\text{Ce}_2\text{O}_2\text{CO}_3$ at the GBs/surfaces gives an excess of oxygen vacancies

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