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## Role of intermediate amorphous phases in CeO<sub>2</sub> mesocrystal formation

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In this work we shed the light on the mechanism of mesocrystals formation. We use the process of gamma-radiation induced synthesis of CeO<sub>2</sub> mesocrystals as a model reaction, and perform time dependent studies using combination of different techniques including energy-filtered electron radial distribution function analysis and in-situ TEM. We follow the reaction from the very early stages showing the role of intermediate amorphous phases at each stage. The work is published in *Angewandte Chemie*.

**Primary authors:** Dr LI, Zhuofeng Li (Department of Chemistry, KTH Royal Institute of Technology); PI-ANKOVA, Diana (Max Planck Institute of Colloids and Interfaces); YANG, Yi (Department of Chemistry, KTH Royal Institute of Technology); ZSCHIESCHE, Hannes (Max Planck Institute of Colloids and Interfaces); Prof. JONSSON, Mats Jonsson (Department of Chemistry, KTH Royal Institute of Technology); Dr SOROKA, Inna (Department of Chemistry, KTH Royal Institute of Technology); TARAKINA, Nadezda (Max Planck Institute of Colloids and Interfaces)

**Presenter:** TARAKINA, Nadezda (Max Planck Institute of Colloids and Interfaces)

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