

# BARIUM ZIRCONATE PRODUCTION BY A CONTINUOUS PROCESS OF HYDROTHERMAL SYNTHESIS UNDER SUPERCRITICAL CONDITIONS.

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## ABSTRACT

BaZrO<sub>3</sub> is a structural perovskite material which is very interesting, not only for its dielectric properties, but also because of its high refractoriness and chemical stability, which make it a good substrate for the manufacturing of high temperature superconductors.

As nanopowder, this material appears particularly interesting because it can be sintered at lower temperatures than in a micrometric state.

We used a device built from the description of the apparatus of ARAI and al (1) to synthesize nanopowders of inorganic materials in supercritical water in a continuous flow.

In the present paper, the steps leading to nanostructured powders of BaZrO<sub>3</sub>, under different processing conditions and from different precursors are described.

If one compares our results with those of the literature in a classical hydrothermal medium (2 - 5), one can note that the times of synthesis are considerably decreased and that the material is generally of lower size.

## References :

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