

Title (en)
PROCESS FOR PREPARATION OF MONODISPERSED BARIUM CONTAINING FERRITES.

Title (de)
VERFAHREN ZUR HERSTELLUNG MONODISPERGIERTER, BARIUM ENTHALTENDER FERRITE.

Title (fr)
PROCEDE DE PREPARATION DE FERRITES CONTENANT DU BARIUM MONODISPERSE.

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Application
EP 88901364 A 19880114

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Abstract (en)
[origin: WO8805337A1] An improved process for preparation of well-defined monodispersed colloidal particles of barium containing ferrites. This process involves the formation of colloidal barium ferrite particles in aqueous media by phase transformation of a ferrous hydroxide gel in the presence of barium ions. In this process, a magnetite is initially formed in aqueous solution and barium substituted into the resultant particle by displacement of Fe²⁺. This procedure is performed in a nonoxidizing atmosphere and under mildly caustic conditions. As the reaction proceeds to completion (aging) the system becomes decidedly more acidic. The colloidal particles produced in accordance with this invention are easily dispersible in aqueous media and, unlike magnetite, are superparamagnetic in response to a magnetic field. This procedure is in sharp contrast to more traditional methods of solid state transformations of the magnetite to ferrite at temperatures typically in excess of 1000 DEG C.

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Citation (search report)
• [XP] JOURNAL OF CELLULOSE AND INTERFACE SCIENCE, vol. 117, no. 2, June 1987, pages 593-595, Academic Press, Inc.; "Uniform colloidal barium ferrite particles"
• [AP] JOURNAL OF THE AMERICAN CERAMIC SOCIETY, vol. 71, no. 1, January 1988, pages C60-C62, Westerville, OH, US; X.-J. FAN et al.: "Preparation of uniform colloidal strontium ferrite particles"
• See references of WO 8805337A1

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