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(54) Title: NANO MAGNETIC HARVEST THROUGH NANO-

(57) Abstract: The present invention relates to a process for producing magnetic ferrite and orthoferrites nanocrystals by using microwave-thermal treatment method. The detailed of the process is as follows: firstly polyvinyl pyrrolidone is diluted in deionized water by heating and stirring to form a PVP solution; secondly, metal nitrate precursors including iron nitrate and another metal nitrate or rare earth elements nitrates (such as cerium nitrate) are added into PVP solution at 80 oC for 2 h and stirred until becomes transparent solution; thirdly, the nitrate precursors/PVP solution is placed on a Petri dish and heated by microwave irradiation (power 1000 W) for 5 min until water was eliminated; fourthly, solid crystals that are formed are crushed and ground in a mortar to form powder, and finally the powder are placed in a furnace and calcined at 500-700oC for 3 h for eliminating organic compounds and to favor the crystallization [Fig. 1]

