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SYNTHESIS AND FTIR STUDIES OF COBALT SUBSTITUTED BARIUM HEXAFERRITE NANOPARTICLES

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ABSTRACT

The present paper deals with the investigations on how the Fourier transform infrared spectroscopy studies of cobalt substituted M-type $\text{BaFe}_{12}\text{O}_{19}$ ferrite nanoparticles prepared by sol-gel auto-combustion technique. Fourier Transform Infrared (FTIR) spectroscopy technique for the confirmation of crystal structure is outlined.

Article Indexed in



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Introduction

The permanent magnet and high density magnetic recording media [1–3] are just two of the many applications that exist for M-type hexagonal barium hexaferrite with its stoichiometric chemical formula $\text{BaFe}_{12}\text{O}_{19}$, often denoted as BHF. Barium hexaferrite ($\text{BaFe}_{12}\text{O}_{19}$)

A Good Introduction :-

Depict the significance (importance) of the study - why was this value doing in any case? Give a wide connection. Extremely briefly depict the exploratory configuration and how it achieved the expressed destinations.

Materials

Must add methods and materials in your article.

A Good Materials :-

Methods & Materials used to per research topic.

Result

Fourier infrared spectra of all the samples of the $\text{Ba}_{1-x}\text{Co}_x\text{Fe}_{12}\text{O}_{19}$ ($x = 0.0, 0.5$ and 1.00) ferrite nanoparticles were recorded at room temperature in the range 400 cm^{-1} - 4000 cm^{-1} on a Perkin Elmer spectrometer (Model 783).

A Good Result :-

Abridge your discoveries in content and show them, if fitting, with figures and tables. In content, depict each of your outcomes, guiding the per user toward perceptions that are generally significant.

Conclusion

In summary, we have successfully synthesized $\text{Ba}_{1-x}\text{Co}_x\text{Fe}_{12}\text{O}_{19}$ nanoparticels by sol-gel auto-combustion technique. It is observed that the increase in the Co^{2+} content causes the change in the intensity of the FTIR spectra.

A Good Conclusion :-

Clarify the majority of your perceptions however much as could be expected, concentrating on systems. Choose if the trial outline satisfactorily tended to the speculation, and whether it was legitimately controlled.

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A Good References :-

There are Places where the Author Varsha C. Chavan and Surendra S. More Need to Cite a Reference, but Have Not

SUMMARY OF ARTICLE

No.		Very High	High	Average	Low	Very Low
1.	Interest of the topic to the readers		✓			
2.	Originally & Novelty of the ideas	✓				
3.	Importance of the proposed ideas	✓				
4.	Timelines			✓		
5.	Sufficient information to support the assertions made & conclusion drawn		✓			
6.	Quality of writing (Organization, Clarity, Accuracy Grammer)		✓			
7.	References & Citation (Up-to-date, Appropriate Sufficient)	✓				

FUTURE RESEARCH PLANNING:

1. International Upcoming Events in Physics (<http://phys.colorado.edu/upcoming-events>)
2. Upcoming Physics & Astronomy Events (<http://www.pa.ucla.edu/events>)
3. Research Projects in Physics (http://solar.physics.montana.edu/sol_phys/projects.shtml)
4. 3rd July 2014 3rd International Conference on Civil Engineering and Materials (ICCEM 2014) (<http://www.iccem.org/>)

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REVIEWER COMMENTS

- The writing audit was careful, the approach was carefully exhaustive and fused the utilization of sufficient quantities of tests in dust size examination and blast tests.
- I discover no shortcoming at all with the routines, information examination, or conclusions.
- The work, as with all work advancing from this specific gathering, is generally sound.

Authorized Signature

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Review Editor

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