



SDI Review Form 1.6

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2013_BJAST_3803
Title of the Manuscript:	Effect of Sodium Carboxymethyl Cellulose concentration on the Photophysical Properties of Zinc Sulfide Nanoparticles

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	The research paper reports interesting and useful results about the photo-physical properties of ZnS nanoparticles capped with CMC but certain points must be clarified. It needs major revision due to following reasons:- 1. The language is very poor. It must be checked thoroughly and corrected 2. In abstract, the particle size has been given in eV, which is unit of energy. Size may be in nm. 3. The range of size mentioned in abstract is not same as given in the text. 4. In abstract, it is mentioned that particle size increased with CMC amount, but the details given is text show different results by various methods. 5. How pH was adjusted during the synthesis? 6. In 3.2, line 176, Ref. No. is not given. 7. The results of absorption spectra in Fig. 4, in Table 1 and in 3.3 text (line 202) do not tally with each other. 8. Line 216, equation (5); why there is square ,where as equation (3) don't have, and it is just substitution? 9. In line 223 "absorption energy" should be 'forbidden band gap energy" 10. Lines 282 and 283, whether it is 'bonds' or 'bands' 11. In 3.5; Line 304, excitonic band should be at	1. The language has been checked by a third party and errors have been corrected. 2. No. Particle size was given in nm and energy in eV. 3. This is true and the correction has been effected accordingly. 4. No. We did not use the word 'increased' but 'varied'. 5. Correction effected; see line 90. 6. See line 124, 125, 143, 156, 170. 7. Correction effected. 8. Corrected. 9. Both are the same, but I have changed according to your advice. 10. Its bond and the corrections have been effected.



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	lower energy or larger wave length as compared to band-to band excitation. 12. How the broadness of luminescence peaks suggests smaller size distribution? 13. Fig.6; the letters in the spectra are very small. 14. In 4, line 350; 'ZnS sulphide' should be corrected. 15. Analysing the Table I, it is seen that - a) Band gap is highest for 1_2 CMC sample giving smallest particle size by EMA; at higher as well as lower CMC, particle size is larger. How can this be explained? b) Particle size by XRD is largest for 1_2 CMC, just the opposite of that by EMA. Why? Particle size by XRD and EMA is nearly same for 1_3 CMC sample only. c) There is no systematic increase or decrease of particle size by increasing CMC. d) The size obtained by SEM is much larger and decreases with increasing CMC. Is it particle size or agglomerates? Can it be explained on the basis of stability? The article may be published after proper explanation of above points.	11. Yes, now is 'or' removed. 12. Emission peaks of bulk crystalline materials are often sharp and not broad. 13. They are legible. 14. Now changed to Zinc sulphide. 15. a) Explanations have been given on the possible reason for the observed behaviour. The value of the bang gap energies was for the freshly synthesized NPs, while XRD and TEM were for the aged samples. Moreover, EMA overestimate particle sizes lower than 5.0 nm. b) You may be looking at the old manuscript. In the reversed manuscript we removed the factor $D=3L/4$ (L is the coherence length) from the XRD results since the particles were observed not to be entirely spherical. c) Yes no systematic increase of particle sizes obtained by EMA, but it appears there is a systematic decrease in particle sizes from XRD, SEM and TEM results. d) It is agglomeration of particles. Yes, it can is now explained on the basis of stability. Thank you for finding the paper worthy of publication.
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Minor REVISION comments		
Optional/General comments		