

### Mild condition synthesis of $ZnFe_2O_4$ for biomedical application

이재영, 유태경<sup>†</sup>, 김기윤  
경희대학교  
(tkyu@khu.ac.kr<sup>†</sup>)

Recently, many researches have been focused on the application of  $ZnFe_2O_4$  such as antibacterial, photocatalyst. Thereafter, the value of this materials is increasing. But other synthetic methods are uneconomical because they include harsh conditions such as high temperature and pressure. For that reason, we conduct this experiment in mild condition for minimize cost. In this work, we used PEG instead of octylamine to enhance biocompatibility.

In our human body, Zn ions and Fe ions are used for bone regeneration and blood vessel regeneration respectively. From the ICP data, we confirmed Zn, Fe ions dissolved in turn. Until now, to inject nanoparticles in human body is reluctant to us, because nanoparticles remain after reaction. In this respect, we improve a remaining problem effectively.