Abstract Submitted
for the MAR13 Meeting of
The American Physical Society

Non-Bleaching Photoluminescent Magnetic Nanoparticles LU ZOU, CHANJOONG KIM, Kent State University, EMAD GIRGIS, WAGDY K. B. KHALIL, National Research Centre, Egypt — We report a new type of photoluminescent magnetic nanoparticles produced by a very simple process. The nanoparticle consists of an ordinary magnetic nanoparticle as core and a non-toxic polymer shell. The biocompatibility is evaluated using in-vivo tests on mice. They are non-bleaching photoluminescent without any addition of fluorophores, such as quantum dots or fluorescent dyes that can be toxic and easily photobleached, respectively. This work provides a low-cost, bio-safe, non-bleaching alternative of conventional fluoroscent magnetic nanoparticles which covers a wide range of applications, from bio-imaging to biomedical diagnostics and therapeutics, such as hyperthermia.

Lu Zou
Kent State University

Date submitted: 09 Nov 2012 Electronic form version 1.4