Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Application of nanohorns to anti-cancer drug carriers MASAKO YUDASAKA, JST, NEC, MINFANG ZHANG, KUMIKO AJIMA, JIN MIYAWAKI, JST, TATSUYA MURAKAMI, KUNIHIORO TSUCHIDA, Fujita Health Univ., SUMIO IIJIMA, JST, NEC, Meijo Univ — Potential applications of single-wall carbon nanohorns (SWNH) that have shown no acute toxicity in various tailored animal experiments, to the drug delivery system have been studied. We previously reported that the drugs were able to be incorporated inside SWNH at room temperature through liquid phase, and chemical modifications with hydrophilic molecules enhanced dispersion of SWNHs in aqueous solutions. The modifications with the tumor-targeting molecules were also possible. The contrast agent attachments enabled the in vivo visualization of SWNHs by magnetic resonance imaging. We show in this report how the effects of anti-cancer drugs were influenced by being incorporated inside SWNHs, and discuss its reasons.

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Date submitted: 26 Nov 2007 Electronic form version 1.4