

# ***SYNTHESIS, STRUCTURE AND MAGNETIC PROPERTIES OF NANOWIRES AND FILMS BY ELECTRODEPOSITION***

by Ms. Sirikanjana Thongmee

**Date:** 22 June 2009, Monday  
**Time:** 10.00am to 11.00am  
**Venue:** E3A-04-26 (Conference Room)

## **Abstract**

FePt films have showed potential applications recent years in magnetic recording media, micro-electromechanical systems (MEMS) and spintronics devices, which require excellent high perpendicular anisotropy ( $K_u$ ), high coercivity ( $H_c$ ), and large energy product  $(BH)_{max}$ . This work focused on synthesis, structure and magnetic properties of FePt thick films and FePt nanowires by using electro-deposition technique. In addition, FePt thick films were deposited on different (Au, Ag and Cu) underlayers. The highest coercivity with perpendicular anisotropy (18 kOe) was obtained when FePt thick films were deposited on Ag underlayers. The physical mechanism of high coercivity of FePt thick films with different (Au, Ag and Cu) underlayers was discussed in detail. Moreover, doping the third element into FePt films to lower the transformation temperature will be discussed. The post annealing (400 °C) of FePt thick films led to the coercivity as high as 7 kOe..

## **Speaker Ms. Sirikanjana Thongmee**

Ms. Thongmee obtained her B.S. (Physics) from Prince of Songkhla University, Thailand in 1997 and M.Sc. (Chemical Physics) from Mahidol University, Thailand in 1999. From August 2004, she started her PhD study under A/P Ding Jun in department of Materials Science and Engineering, National University of Singapore. Currently, she is a research fellow in Department of Materials Science and Engineering, NUS.

***ALL ARE WELCOME!***

**A/P Gong Hao Host**