Abstract Submitted
for the MAR09 Meeting of
The American Physical Society

Terpyridine Monolayer FETs as models for charge transport[1]
XIALING CHEN, AARON CRANDALL, MARCUS HANWELL, GEOFFREY HUTCHISON, THE RESEARCH GROUP OF DR.HUTCHISON TEAM — With the rising interest in organic electronic materials, an understanding of electronic transport, and the effects of defects on electronic transport, will be an important step towards a useful understanding of these materials. To this end, 2,2':6',2" terpyridine will be used to make metal complexes which can act as organic semiconductors. Controlled variation of metals and ligands in these systems will make electronic defects in the system without substantive effect on the morphology of the film. Surface chemistry and self assembly can be used to form highly ordered monolayers on various substrates. AFM, FET mobility and bulk electrochemistry measurements are used to characterize these systems. Finally, experimental measurements will be compared with simulations of these systems, and the two will be used to better predict the behaviors of organic semiconductors in general.

[1]University of Pittsburgh

Xialing Chen

Date submitted: 08 Dec 2008 Electronic form version 1.4