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 ORNL Taxi 680-2303
 680-9800
 Weather 574-9836

SNS

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 RCT Support (radiation
 control technician) 274-8658
 User Support 241-4432
 User Office 574-4600

HFIR

Control Room 574-7035
 RCT Support (radiation
 control technician) 574-6713
 User Office 574-4523

SNS Café, Bldg 8600

Breakfast hours: M–F, 7:00 am – 9:30 am

Lunch hours: M–F, 10:45 am – 1:15 pm

HFIR Canteen, Bldg 7910

Lunch hours: M–F, 10:45 am – 1:15 pm

For questions or comments email us:
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Research Spotlight

Study asks why organic photovoltaics are so efficient

Low cost and scalability make solar cells based on the polymer–fullerene bulk heterojunction (BHJ) one of the most promising technologies for next-generation solar energy conversion. Significant progress has been made on the power conversion efficiency of such solar cells. Researchers at the University of Chicago recently developed the semiconducting copolymers PTB7 (polymers with alternating thienothiophene and benzodithiophene units). These exhibited a superior power conversion efficiency when combined with fullerenes as acceptors. The physics behind their performance, however, remains puzzling. A deeper understanding of the molecular organization and nanoscale morphology is required to gain insight into the origin of superior organic photovoltaic efficiency. Wei Chen of Argonne National Laboratory is using the CG-2 General-Purpose SANS instrument at HFIR this week to systematically decipher the structure–property relationships of the PTB series. The CG-2 is optimized for providing information about structure and interactions in the size range of 0.5–200 nm and specializes in soft and hard condensed matter and magnetic systems. Instrument scientist Yuri Melnichenko and postdoc Lilin He of ORNL are collaborating.

This Week's Users

HFIR, Bio-SANS (CG-3)

Kushol Gupta (Univ Penn)
 Robert Standaert (ORNL NScD)
 John Katsaras (ORNL NScD)
 Paul Drazba (Univ of Tenn)
 Frederick Herle (ORNL NScD)
 Jianjun Pan (ORNL NScD)

**HFIR, Neutron Powder
 Diffractometer (HB-2A)**

Robert Standaert (ORNL NScD)
 John Katsaras (ORNL NScD) Paul Drazba
 (Univ of Tenn)
 Frederick Heberle (ORNL NScD)
 Jianjun Pan (ORNL NScD)

**HFIR, Four Cycle Diffractometer
 (HB-3A)**

Huibo Cao (ORNL NScD)
 Stuart Calder (ORISE)

HFIR, Cold Neutron TAS (CG-4C)

Xingye Lu (Inst. of Physics, Beijing)
 Mengshu Liu (Univ of Tenn)
 Pengcheng Dai (Univ of Tenn)
 Shiliang Li (Inst. of Physics, Beijing)

HFIR, Polarized TAS (HB-1)

Zhijun Xu (Brookhaven Nat. Lab)
 Stephen Shapiro (Brookhaven Nat. Lab)
 Guangyong Xu (Brookhaven Nat. Lab)
 Chris Stock (NCNR)
 Peter Gehring (NIST)
 Jinsheng Wen (Brookhaven Nat. Lab)

**HFIR, Fixed Incident Energy
 TAS (HB-1A)**

Jun Zhao (UC Berkeley)
 Wenbin Wang (Univ of Tenn)
 Xiaoshan Xu (ORNL MSTD)

HFIR, WAND (HB-2C)

Cuihuan Wang (ORNL NScD)
 Mark Lumsden (ORNL NScD)
 Andrew Christianson (ORNL NScD)
 Songxue Chi (ORISE)

HFIR, TAS (HB-3)

Jaime Fernandez-Baca (ORNL
 NScD)
 Songxue Chi (ORNL NScD)
 Feng Ye (ORNL NScD)
 Chenglin Zhang (Univ of Tenn)
 Pengcheng Dai (Univ of Tenn)

Local Happenings

1/13/2012

A Technical Overview of Oracle Spatial,
Jayant Sharma and Siva Ravada
Building 5700, Room L-204,
10:00 -11:00 A.M.