ASM International

The Manitoba Chapter

BULLETIN

Thursday, November 06, 2008 ***Technical Meeting***

Nano/Microfabrication: Devices and Fabrication Technique

Nano Systems Fabrication Laboratory - NSFL
Speaker: Dr. Cyrus Shafai, P.Eng.
Associate Head Electrical Engineering
Director Nano-Systems Fabrication Laboratory
University of Manitoba

Nano/microfabrication techniques are finding wide usage in industry to enable miniature devices, specialty coatings, or precision manufacturing. Some industrial devices already in wide usage include inertial sensors, ink jet printer nozzles, blood analysis systems, and gas sensors to name a few. An introduction to some of the many technologies used for fabrication will be given, as well as a brief explanation of some of the research ongoing at the University of Manitoba. A description of the nano-system fabrication capabilities already in place, as well as planned, at the University of Manitoba Nano-Systems Fabrication Laboratory will be given.

The seminar will be followed by a tour of the Nano-Systems Fabrication Laboratory.

More information about NSFL can be found on page 4.

Instructions & Time: The presentation will start at 7:00 pm. Please arrive at the NSFL location at 6:30 pm for free donates and coffee, compliment of ASM International The Manitoba Chapter.

Location: Room: E2-350 EITC (Engineering and Information Technology Complex)

Cost: Free

Registration: Required by <u>Wednsday, November 05, 2008.</u> Please phone Bogumil Kryniewska, at 254-8201or send an e-mail to bkryniewska@shaw.ca. to register, since number is limited to the first 20 applicants.

Directions: Map for the NSFL location can be found on page 4.

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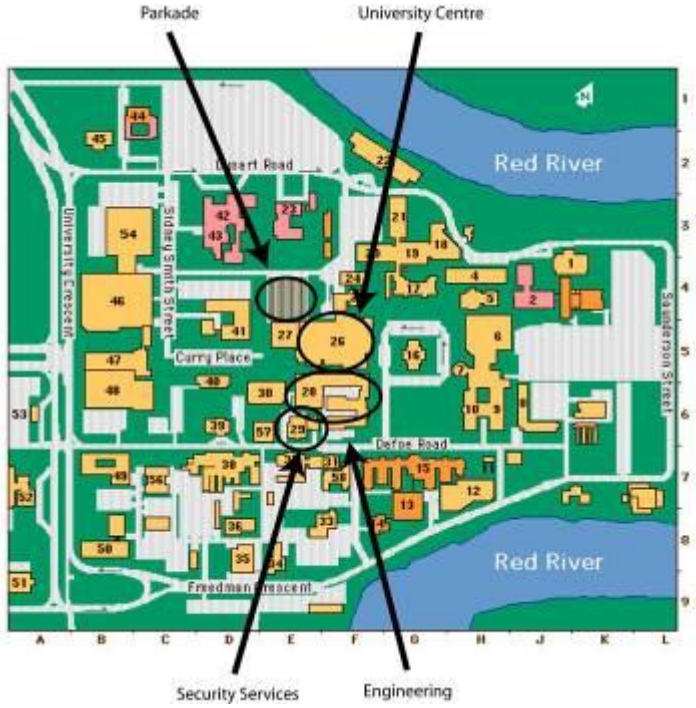

NSFL Location: Room: E2-350 EITC (Engineering and Information Technology Complex)

About the NSFL

The NSFL is an open access cleanroom micromachining lab established to provide nano-system R&D and prototyping to university and industry researchers. As a central facility, the NSFL links multidisciplinary researchers from many university departments. This 4000 ft. sq. laboratory possess over $4 million of nanofabrication infrastructure, providing a comprehensive suite of state of the art equipment and software for MEMS fabrication, analysis, and testing.

- The NSFL has assisted 17 research groups from across the U of M campus, and several outside industry and organizations. Over 80 professors and students (ranging from high school to Ph.D. level) have used the NSFL. Some of the supported research projects have included: http://www.ee.umanitoba.ca/research/nsfl/NSFL_Home.htmlMEMS for telecommunications
- Gas sensors for detecting grain spoilage
- Nanoelectronic sensor systems
- Microsensors for magnetic and electric field measurement
- Ultra-thin dielectrics for nanoelectronics
- Microfluidic biosensor for cell diagnostics
- Conducting polymer-based nanoelectronics
- Magnetic, thermal, and electrostatic microactuators
- Micromolding and electroplating
- Coatings for liquid crystal research
- Microfluidics for industrial cooling
- Coatings for synchrotron FTIR microspectroscopy
- Spin excitations and ferromagnetic resonance in semiconductors
- Supercapacitor materials

To learn more about NSFL, visit their website: http://www.ee.umanitoba.ca/research/nsfl/NSFL_Home.html

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International Metallographic Society (IMS)

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Electronic Device Failure Analysis Society (EDFAS)

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MATERIALS NEWS

Global Alumina Receives Deferred Subscription Payment from JV Partners
Global Alumina Corporation, a corporation participating in a joint venture to develop an alumina refinery, mine and associated infrastructure in the bauxite-rich region of the Republic of Guinea, announced that it has received the aggregate first deferred subscription payment from its joint venture partners of approximately $42.2 million.

Mini-Mill Gerdau Ameristeel Acquires Metro Recycling
Gerdau Ameristeel, a mini-mill steel producer, announced that it has acquired Metro Recycling, a scrap processor headquartered in Guelph, Ontario.

New Instrument Characterizes Color Impression of Coatings
BYK-Gardner, worldwide partner of the automotive, paint and plastic industries for quality control of color, appearance and physical properties, is introducing a new instrument to objectively characterize the total color impression of effect coatings: the BYK-mac.

ASM Manitoba Chapter
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ASM International:

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For more information about ASM and its benefits visit the official website at www.asminternational.org