



Melbourne Centre for Nanofabrication

#### FEI Helios NanoLab 600 DualBeam FIB-SEM installed at MCN

We are delighted to announce that the FEI Helios NanoLab 600 DualBeam FIB-SEM has now been installed at MCN. This flagship instrument was delivered to MCN on 31 May 2010, and the installation was carried out by engineers from FEI and nanoTechnology Systems (NTS). The instrument was officially accepted by MCN staff on 21 June 2010, and is currently being rigourously tested for reliability and performance by MCN staff.

The Helios NanoLab 600 FIB-SEM at MCN offers the highest resolution imaging, contrast, stability and speed performance for ion beam and electron beam imaging and lithography in Victoria, and is one of three such instruments in Australia.



MCN staff together with FEI and NTS engineers at the official acceptance of the Helios NanoLab 600 at MCN. (From L to R): Douglas Mair (MCN), Aiden Martin (NTS), Ebb Huggins (FEI) and Matteo Altissimo (MCN).

The instrument has the capability to direct write and simultaneously image features down to tens of nanometres. In addition, a selection of accessories such as enhanced carbon etch, platinum deposition, and an *in-situ* nanomanipulator will enable researchers to push the boundaries of 2D and 3D nanofabrication and characterization.

The instrument will become available for open access by external researchers shortly, and MCN staff will offer training and technical support to all registered users. To become a registered user of MCN, please contact Facility Manager, Steve Walker (<a href="mailto:steven.walker@mcn.monash.edu.au">steven.walker@mcn.monash.edu.au</a>) for further details and procedures. For technical enquiries regarding the instrument capabilities, please contact Instrument Manager, Dr. Manoj Sridhar (<a href="mailto:manoj.sridhar@mcn.monash.edu.au">manoj.sridhar@mcn.monash.edu.au</a>).

Official opening of MCN – Wed, July  $7^{th}$  2010, 10:15 am – 12:15 pm

### Staff Profile



Steve Walker brings to the over 30 MCN vears engineering experience with almost 20 years of this specifically relating research technical support and facilities management in the UK. He graduated in 1999 from Sheffield Hallam University with a 2:1 degree in Electronic Systems and Information Engineering leading to Chartered Engineer Status in 2005; however, his career in academia began in 1991 upon his appointment as a Research Technician within the High Energy Particle Physics group at the University of Sheffield. In 1996 he moved to the Department of Electronic and Electrical Engineering at the University of Sheffield to take on the role of Facility Manager for the EPSRC National Centre for III-V Technologies before joining MCN as Facility Manager in November 2009.

Steve is responsible for the day to day running of MCN and can be contacted via phone or email for any queries.

# **News**

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## MCN Industry Open Day a big success

On April 10th 2010, MCN opened its doors to local industrial partners to showcase the facility and to encourage discussion on possible applications that MCN could assist with. The event was organized in conjunction with DIIRD, SEMIP and Monash University and was attended by numerous local businesses.



Victorian Minister for Innovation Gavin Jennings MLC launches the Victorian Action Plan for Small Technologies at the MCN Industry Open Day

The guest-of-honour, Victorian Minister for Innovation Gavin Jennings MLC, addressed the attendees and launced the Victorian Action Plan for Small Technologies. This program has been put in place to encourage Victorian businesses to explore the potential of small technologies to solve problems and enhance products. A voucher system, where vouchers can be redeemed at high-tech facilities such as MCN, has been put in place to allow businesses to access these technologies.

#### Farewell to Sue

The MCN staff would like to wish Sue Loughnan all the best in her newly promoted role outside MCN and thank her for her huge contribution.

## MCN is proud to announce its first round of seminars

Confirmed speakers and proposed dates:

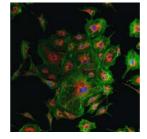
Speaker	Institution	When
Dr Scott Watkins	CSIRO	4th June 2010
Prof Paul Mulvaney	Melbourne Uni	18th June 2010
Dr Udo Bach	Monash Uni	2 <sup>nd</sup> July 2010
Dr Tim Davis	CSIRO	16th July 2010
Prof Andrew Peele	La Trobe Uni	30 <sup>th</sup> July 2010
Prof Steven Prawer	Melbourne Uni	6 <sup>th</sup> August 2010

Seminars will be held at MCN boardroom 151 Wellington Rd, Clayton, VIC

Starting times will be 2:30pm unless otherwise advised

# MCN unveils biological imaging capability

The Nikon A1 Confocal Microscope is now available for external users. In conjunction with the commissioned IPK Nanowizard Bio AFM, MCN can offer a powerful suite of tools for biological imaging. This dual configuration allows research into targeted drug delivery involving receptor-ligand



interactions. Direct correlation of high-resolution surface features with specific fluorescent tagged molecules will generate a better understanding of interactions as well as surface feature analysis. Receptors can also be probed using an AFM tip coated in ligands enabling manipulation at a very fine scale.

For technical enquiries regarding the capabilities, please instrument Douglas contact (douglas.mair@mcn.monash.edu.au).

#### For MCN enquiries, please contact:

Steve Walker, Facility Manager

151 Wellington Road

Clayton

**E** enquiries@nanomelbourne.com

Vic 3168

P +61 3 9902 9653

Australia

**F** +61 3 9902 9868