David Cockayne Centre for Electron Microscopy

Facility for TEM, SEM & FIB

e: emaccess@materials.ox.ac.uk
w: www-em.materials.ox.ac.uk
Electron Microscopy for Research Projects

Dr Neil Young, EM Facility Manager

- Each major type of instrument has a support scientist who is the first point of contact in terms of EM questions, along with your project supervisor.
The facility maintains a suite of EM and related instrumentation at the main Parks Road laboratory. There are also some SEM’s based at Begbroke.

**JEOL JEM-2100 TEM**

**JEOL JSM-6500 SEM**

**Zeiss Nvision 40 FIB-SEM**

Gold nanoparticles (**PtIII** work, K.MacArthur 2011)

Gold particles

TEM liftout specimen, atom probe grids for lift-out sample analysis,
**EM Access request Process**

1. **Your Supervisor** must complete and return an Access Request for each project.
2. EM Support Scientists discuss the best way to deal with each project, return updated summary to student and supervisor and give dates for training.
3. Student receives training and access to facility instrumentation required for project.

### REQUEST FOR ACCESS TO ELECTRON MICROSCOPES

<table>
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<tr>
<th>Name of Research Project</th>
<th>Date of application</th>
<th>Supervisor</th>
<th>E-mail</th>
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- **Researcher requiring EM:**
  - PhD/PostGrad/Visitor
  - Leaving date (approx): [ ]

1. Briefly describe the research project. What are the scientific goals of the project?

2. What role does EM play in the project? What specific EM data is sought and what are the priorities for the experiments?

3. How heavy is the demand in EM expected to be [occasional, one or two images or spectra, or heavy continued usage]?

4. How many sessions (e.g., per month) are requested and how long will the project run?

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**Website**

[www-em.materials.ox.ac.uk](http://www-em.materials.ox.ac.uk)
EM training has two parts: (i) Post-graduate level lecture courses
(ii) Practical instrument & technique training

You will be advised on which post-graduate lectures to attend, and of course anyone can attend any lectures that interest them. You will also be invited to practical training sessions and modules with the EM research support staff.

All of the information will be covered by the EM access request form/ training summary, which you will receive once submitted/processed...

Relevant post-graduate Lectures:

‘Foundation Topics for Electron Microscopy’  Dr Young /Dr Hughes/ Prof Nellist)
(Covers basic science and mathematics underpinning all EM work)
– Starts Wednesday Week 1, 11am

‘Microscopy and Analysis of Surfaces’  Dr Allen
(Lectures 1-3 cover essential theoretical background for SEM training)
- Starts Week 3
Some people you may encounter

Jennifer Holter  
Research Support Scientist (SEM)  
Jennifer.holter@materials.ox.ac.uk

Gareth Hughes  
Research Support Scientist (FIB)  
gareth.hughes@materials.ox.ac.uk

Neil Young  
Facility Manager/ TEM support  
neil.young@materials.ox.ac.uk

Ian Griffiths  
Sample Preparation / STEM support  
ian.griffiths@materials.ox.ac.uk

+ EM technical staff, Graham Wyatt and Greg Cook

For general queries regarding EM training and research support, contact any one of the three EM support scientists, or emaccess@materials.ox.ac.uk

If you have a technical problem or microscope fault, contact em-faults@maillist.ox.ac.uk
EM Drop-in session

Every Wednesday during term time

10am-12 noon

Holder Building Café

No need to pre-book, just drop in.
Questions ?