

2009 PhD / Masters Project

Development of a Novel Benchtop Synchrotron

Synchrotron X-ray light sources are having an ever increasing impact on a range of scientific endeavours. However even with the construction of the Australian Synchrotron nearby to the Monash Campus, access to synchrotrons will continue to be expensive and undependable. Interestingly, a number of different designs for benchtop synchrotrons exist and some of these are even commercially available. However, these devices are not especially well suited to high resolution imaging of dynamic events within biological systems.



Mirrocle CV4 Benchtop Synchrotron, manufactured by Photon Production Laboratory (top).

Synchrotron X-ray image of lung aeration at birth, taken at SPring-8 by researchers at Monash (left).

The Diamond Synchrotron in England (top), and SPring-8 Synchrotron in Japan (bottom), shows the vast size of full-scale synchrotron facilities.

The Project:

The successful applicant, with interests in R&D, imaging and physics will be a key part of a team continuing ground-breaking work in X-ray imaging. In particular, the project will focus on successfully transferring synchrotron imaging techniques currently employed by our research team, into the laboratory.

Contact Details:

For more information, please visit:
<http://www.MuBeta.monash.edu/>

Or contact **Dr Andreas Fouras**

✉ Fouras@eng.monash.edu

☎ 9905 5963

Facilities

- SPring-8 Synchrotron (Japan)
- Australian Synchrotron
- MuBeta Synchrotron Analogy Facility
- Image Processing Computer Grid