Contribution ID : **147** Type : **Oral**

A synchrotron and a nano-fab lab met in a bar

Friday, 23 November 2018 14:30 (45)

It is rare for a synchrotron and a fabrication facility are located so near each other. But we have this at Clayton. This talk will look at what ANFF Vic Node and the Australian Synchrotron are trying to do together as they aim to set up an x-ray lithography capability. This will enable extreme ultraviolet high-resolution lithography (EUVL) that is usually limited to industrial high-volume manufacturing and accessible by few research groups outside Australia due to cost. By combining Australian Synchrotron and ANFF capabilities, a novel EUV will be created.
This will be useful as nanolithography has enormous potential. Not only will it be the driving-force behind manufacturing the next generation devices, it will also enable scale reduction in the fields of nanotechnology with applications in areas including future electronics, microbiology, biomaterials and surfaces and do this at scale. To realise this potential, routine and cost-efficient large-area nanopatterning and manufacture at length-scales below 50 nm must be achieved. EUVL is the leading candidate to meet this challenge, and will likely offer the next generation of lithography capable of high volume manufacturing at the sub 10 nm length scale. This talk will describe the vision and identify the unresolved technical challenges that limit EUVL resolution.

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Session Classification : Plenary 4

Track Classification : Plenary 4: Dr. Cathy Foley, Deputy and Science Director of CSIRO Manufacturing