

*The cost effective nanofabrication technology for membrane production, fabrication of microfluidic elements and template synthesis of nanowires and nanotubes*

Current conventional anodisation processes produce highly ordered nanoporous metal and metal oxides with uniform pore diameters and interpore distances. These methods produces only monotone pore structures and the task of producing tailored and hierarchical pore geometries is still challenging.

## Technology Overview

The technology has been developed by researchers at the University of South Australia's Ian Wark Research Institute and adds value to existing applications by overcoming the shortcoming of conventional anodization methods. The fabrication process using advanced electrochemical nanostructuring is developed which allows the controlled manipulation of internal pore structure of metal and metalloid substrate and fabrication of nanoporous materials with complex architectures, pore geometries and pore organisation.

It is a broad platform technology that have promising applications in molecular separations, template synthesis of nanomaterials, microfluidics, nanofluidics and drug delivery. The invention is not focused on a particular application and studies into the development of practical devices are currently in process.

## Application

Potential market of this invention is in the area of molecular and ion separations that includes protein, DNA, pesticides, toxic metals, radionucleides etc. In addition to the separation, the sensing and biosensing is another emerging area of application where this technology can be applied for developing biosensing devices which combine separation and detection.

These porous materials have potential to be applied as platform for controlled drug release and development of advanced drug delivery systems and in the aerospace and marine industry where controlling of the metal surface properties is required.

## Investment Opportunities

We are interested in talking to businesses who see potential in this technology for various applications. Our aim is to develop this technique further. A wide range of intellectual property and commercialisation rights can be explored at this stage of the project development.

## IP Position

The Intellectual Property is currently protected by a patent application.

## The Group

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