

Summary of Linkage Projects Proposals for Funding to Commence in 2007

New South Wales

University of Wollongong

LP0775032 Dr SJ Blanksby; Dr PJ Barker

Approved Project Title **Why is ColorbondR steel greener on the other side of the fence? Designing additives to retard weathering of surface coatings**

2007 : \$ 39,118

2008 : \$ 39,118

2009 : \$ 39,118

Primary RFCD 2599 OTHER CHEMICAL SCIENCES

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

BlueScope Steel Research

Administering Organisation University of Wollongong

Project Summary

COLORBONDR steel, the flagship pre-painted steel product of BlueScope Steel Limited, has become an iconic part of both suburban and outback landscapes whether installed as roofing, walling or water conservation accessories (tanks, down-pipes etc). This proposal aims to provide a detailed understanding of molecular level changes in COLORBONDR steel surface coatings brought about by levels of heat and radiation encountered in-service. These insights will lead to further improvements in both lifetime and aesthetic durability of COLORBONDR steel, ensuring continuing economic success of BlueScope in the domestic building market with consequent benefits to manufacturing communities throughout the supply-chain nationwide.

LP0775475 Dr RG Clark; Prof RL Chambers; Mr P Sutcliffe

Approved Project Title **Handling Missing Data in Complex Household Surveys**

2007 : \$ 25,118

2008 : \$ 25,118

2009 : \$ 25,118

Primary RFCD 2302 STATISTICS

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

Australian Bureau of Statistics

Administering Organisation University of Wollongong

Project Summary

The Australian Bureau of Statistics (ABS) has an extensive program of household surveys that is a key source of information on the social and economic conditions of the population. They provide statistics and data on a large range of social and economic topics, such as health, education, the labour force, income and expenditure. Analysis of household survey data by a variety of organisations underpins policy development and evaluation and the expenditure of billions of dollars. This project will substantially improve the cost-efficiency and reliability of Australian household survey data, by creating new approaches for handling missing data that deal with the realities of typical household surveys.

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LP0775456 Dr ZP Guo; Prof HK Liu; Dr JZ Wang; Dr KK Konstantinov; Prof M Forsyth
Approved Project Title **Miniature lithium ion battery for implantable medical device applications**

2007 : \$ 110,000

2008 : \$ 100,000

2009 : \$ 100,000

Primary RFCD 2914 MATERIALS ENGINEERING

APA(I) Award(s): 1

Collaborating/Partner Organisation(s)

DLG Battery Co. Ltd.

Administering Organisation University of Wollongong

Project Summary

This project addresses National Research Priorities in the areas of breakthrough science, frontier technologies and promoting and maintaining good health. Substantial national benefit could be derived from this project: (i) Australia will innovate in an important and intensely active area in which the results will have long-lasting significance in implantable rechargeable battery development; (ii) The development of new scientific knowledge related to this project will place Australia at the forefront of an emerging domain of research body batteries; (iii) In the long term, the successful outcome of this research will lead to more reliable batteries for implantable devices, thereby promoting health care.

LP0775109 Dr G Wang; Prof HK Liu; Dr KK Konstantinov; Dr JZ Wang; Dr D Wexler; Prof O Savadogo
Approved Project Title **Exploration of new catalyst materials for hydrogen/air fed proton exchange membrane fuel cells**

2007 : \$ 110,000

2008 : \$ 100,000

2009 : \$ 90,000

Primary RFCD 2914 MATERIALS ENGINEERING

Collaborating/Partner Organisation(s)

LeadPower Battery Co., Ltd

Administering Organisation University of Wollongong

Project Summary

Fuel cell technology is the most critical technology for the hydrogen economy. Hydrogen/air fed fuel cells can provide pollution-free power sources for vehicles and distributed power generation. A breakthrough in fuel cell technology using hydrogen as fuel will supply us with clean and sustainable energy sources, dramatically improve our environment, and maintain national energy security. The success of fuel cell technology will also significantly reduce our dependence on oil. This research project is expected to establish local expertise, and scientific and industrial know-how on fuel-cell technology.