

A novel lead-free electronic interconnect materials for green electronic packaging

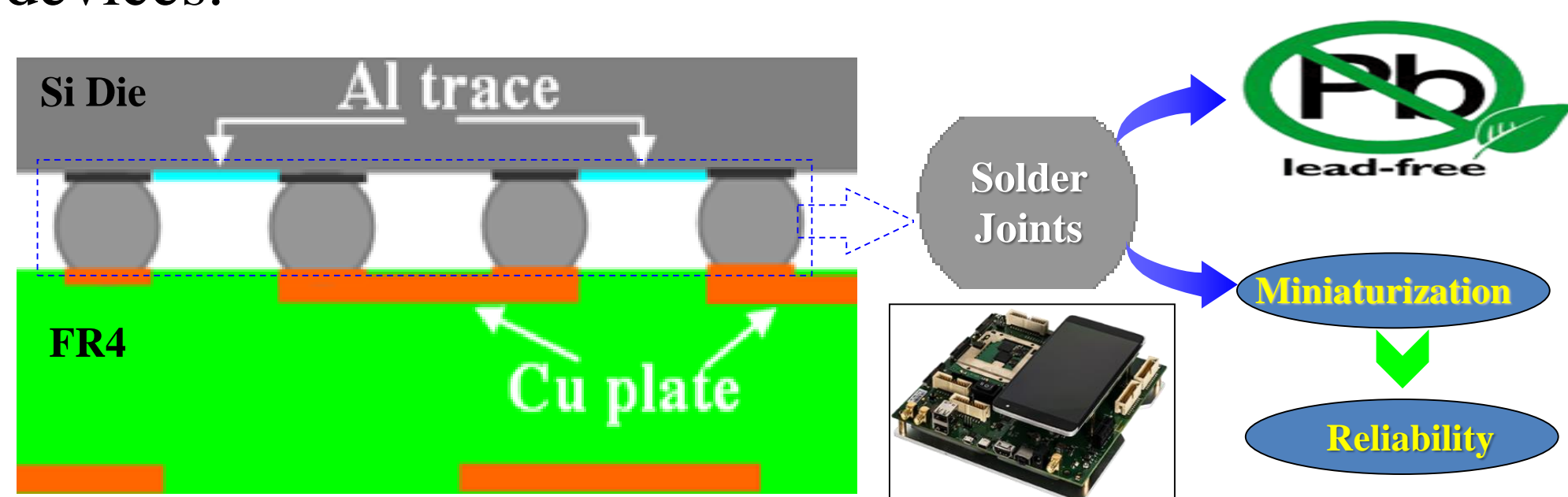
新型高性能无铅焊接材料

Engineering/Laboratory for Precision & Nano Processing Technologies

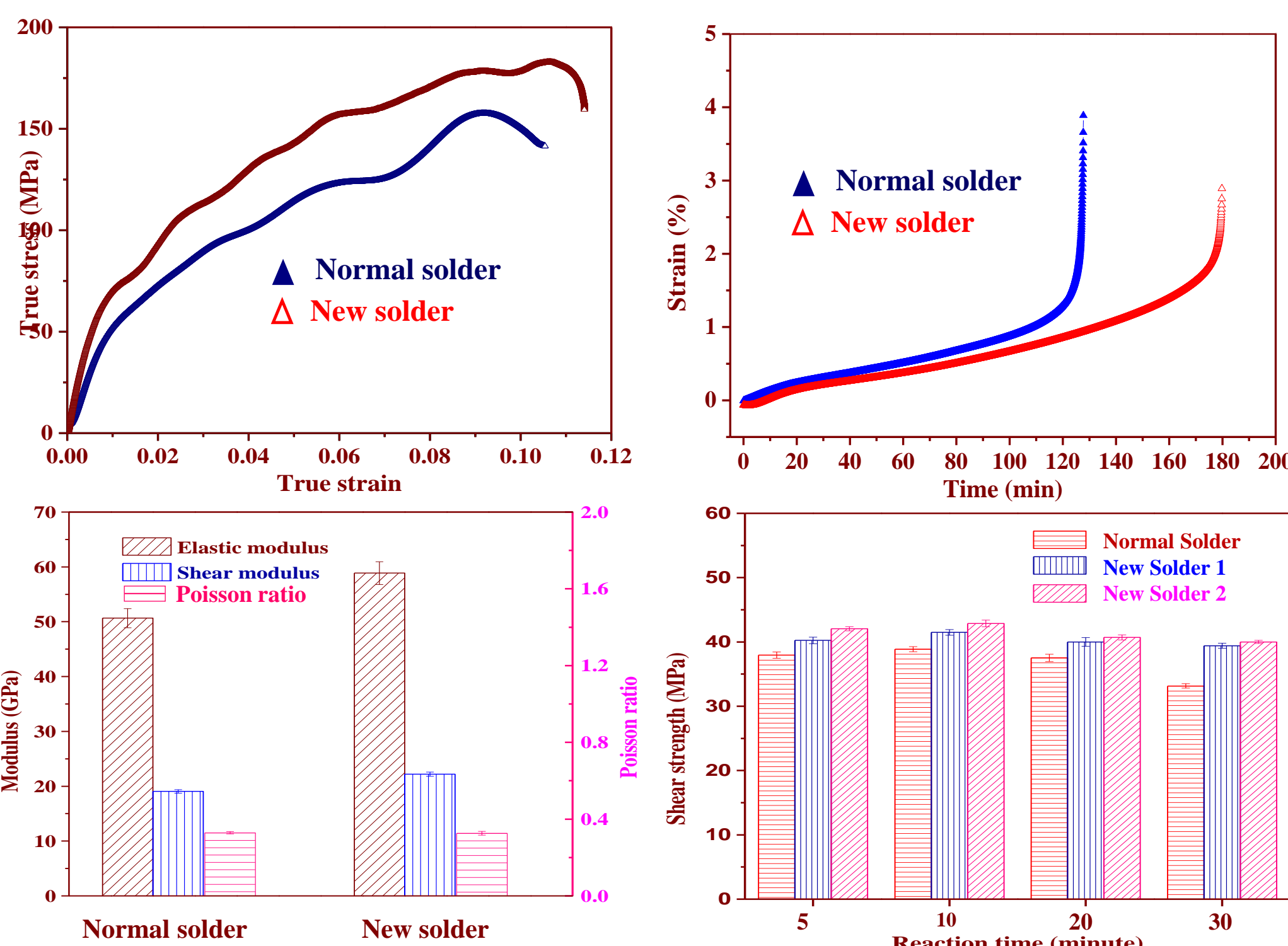
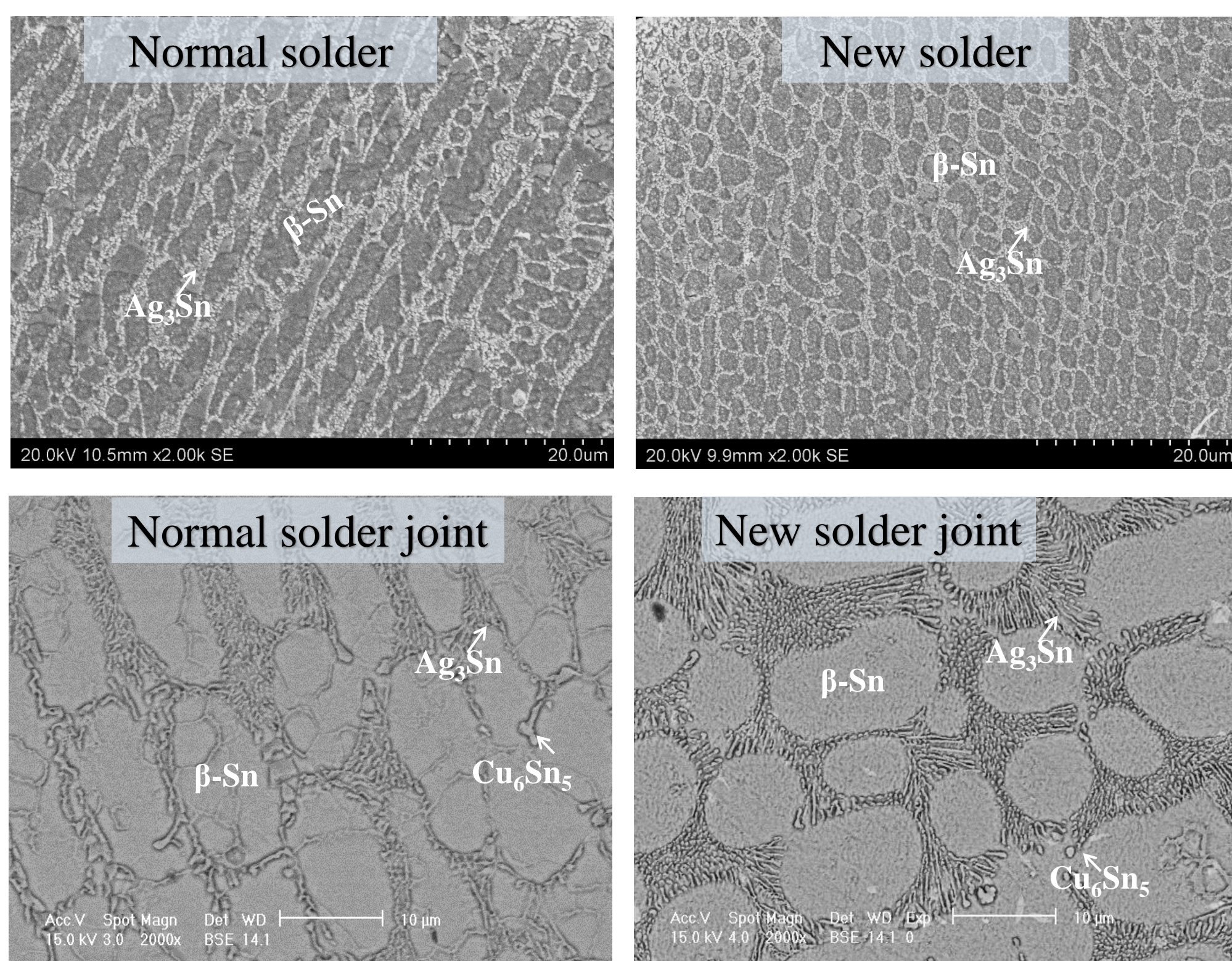
ABOUT OUR TECHNOLOGIES

Objectives

The overarching aim is to manufacture a highly-reliable environmental-friendly electronic interconnect materials that introduce new materials and cost-effective technique that will enhance the life-span of advanced green electronic devices.



Environmental-friendly nanocomposite for green electronics



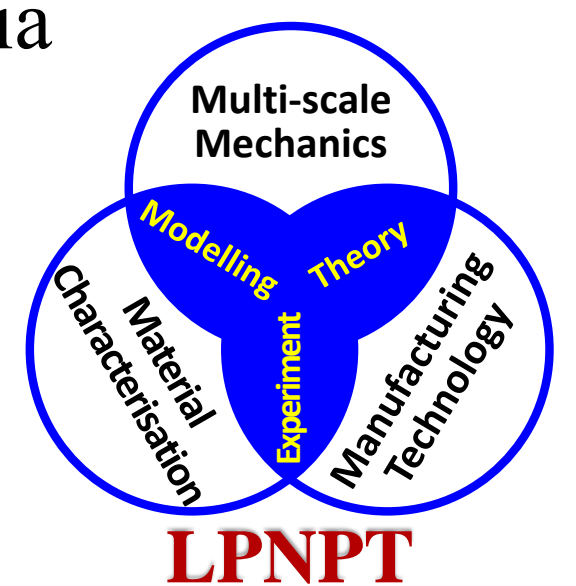
SELECTED RECENT PROJECTS and SUCCESSFUL APPLICATIONS

Some Previous & Current Industry Related Experience

- An innovative manufacturing technology enabling new generations of hip joint prostheses
- An integral approach enabling the defect-free manufacture of microlens arrays
- Automated manufacture of advanced composites
- Development of new super abrasives cutting tool
- Integrated precision machining of complex profiles
- Novel cutting picks for mining industry and an Australian standard.
- A new roll surface treatment technology towards lower wear and higher fatigue life
- High speed cold rolling of tinplate steel
- Multi-scale fabrication facility for complex 3D surface

Some Previous & Current Industry Partners

- Bao Steel China
- Boeing Australia
- Bradken Australia
- Calimmune Australia
- Cochlear Australia
- CRC-ACS Australia
- CSIRO Australia
- Eyecon Australia
- Hard Metals Australia
- Shuangshuzi Coal China
- Silanna Australia
- Sola Australia
- KF Great Wall Prestress China
- Peregrine Semiconductor Australia
- Ringwood Superabrasives Australia



LAB INTRODUCTION

Lab LPNPT is led by Scientia Prof. Liangchi Zhang. This is a world-leading laboratory, equipped with advanced research facilities for testing, characterisation and manufacturing. The team's research covers a broad range of frontier areas - both the fundamentals of technologies, and their direct applications to industry. The research team has published over 550 academic papers and 20 books, and has about 10 patented technologies. The team has established close collaborations with industry partners. The outcomes have led to substantial improvements in production efficiency, energy and resource savings and green manufacturing for industry partners, which has enabled the industry to achieve significant economic benefits, in tens of million dollars per annum.