

機電整合研究所
Institute of Mechatronic
Engineering

先進微系統製程技術與分析
Advanced Microsystem
Process Technology and
Analysis

節能與微系統醫學應用工程實驗室
Energy Saving and Applied
Microsystems Biomedical
Engineering Lab.



O: 綜科 325
#2076

L: 綜科 711
#4830

莊賀喬 教授
Prof. Ho-Chiao Chuang

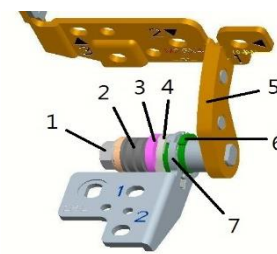
美國科羅拉多大學 機械博士
University of Colorado at Boulder

hchuang@mail.ntut.edu.tw

<http://140.124.30.1/LML/>

■ 研究領域

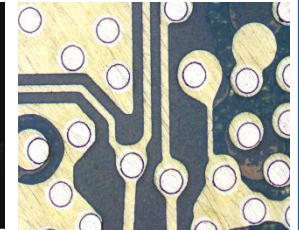
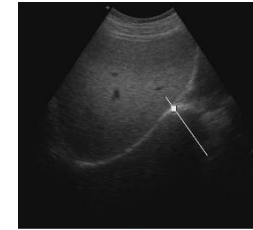
探針卡製程、微機電製程、直通矽晶穿孔(TSV)技術、反呼吸運動床台開發、超臨界電鍍技術、超音波影像技術、工業節能技術



■ 近期研究主題

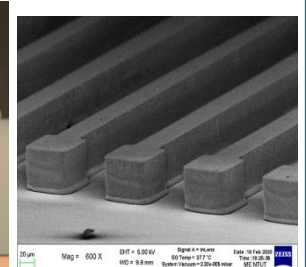
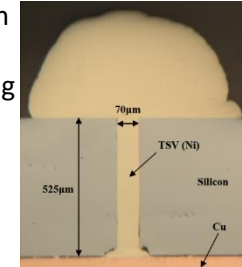
- 筆記型電腦樞軸設計開發
- 牙醫治療椅設計開發
- 呼吸運動補償技術
- 超臨界電鍍高深寬比TSV
- 超音波影像技術
- 超音波超臨界電鍍技術
- 電動機節能技術

筆記型電腦樞軸設計 與 牙醫治療椅設計開發
Laptop hinge design and Dental chair-unit design



■ Research Area

Probe Card, MEMS process, Through Silicon via, Respiratory Compensating System, Electroplating in Supercritical State, Ultrasound imaging, Energy-saving technology for Electrical Motor,



直通矽晶穿孔 與 探針
Through Silicon Via and Probe

■ Recent Topics

- Laptop hinge development
- Dental chair-unit design
- MEMS probe card
- Through silicon via (TSV)
- Compensation technique of respiratory motion
- Ultrasound imaging technology
- Electroplating in Supercritical state for filling TSV with an high aspect ratio
- Energy-Saving on Electrical motor



呼吸運動補償系統
Compensation technique of
respiratory motion