

機械工程系
Department of
Mechanical Engineering

智慧型材料與設計
Smart Materials and
Design

智慧型材料與設計實驗室
Smart Materials & Design
Lab.



O: 綜科 613-C
#2070

L: 綜科 613-B
#4811

李春穎 教授
Prof. Chun-Ying Lee

美國密西根州立大學
Michigan State University

leech@ntut.edu.tw

<http://140.124.30.1/smdl/>

■ 研究領域

電鍍表面處理、智慧型材料與結構應用、複合材料結構分析、機械振動與減振、FDM 3D列印製程

■ 近期研究主題

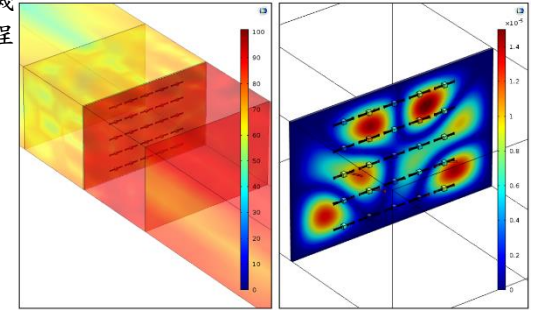
- 超臨界CO₂電鍍鎳合金
- 鍍層之磨耗腐蝕
- 智慧型材料吸振器
- 智能聲波超穎材料
- 深共溶電解液之電鍍製程
- LNG儲槽之結構破損分析
- 雙向可控之壓電振動送料機
- 冷卻風速對FDM製程之影響

■ Research Area

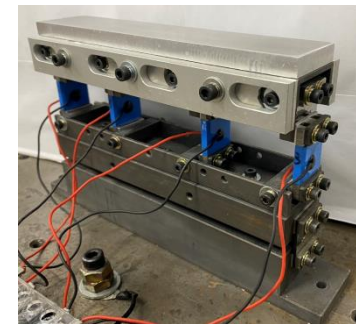
Surface modification using electrodeposition, smart materials and applications, structural analysis of composite laminates, mechanical vibration and vibration reduction, FDM 3D printing

■ Recent Topics

- Supercritical CO₂ assisted Ni and alloy electroplating
- Tribocorrosion of electroplated Ni alloys
- Tunable smart material vibration absorber
- Smart acoustic meta-materials
- Electrodeposition of metallic coating using deep-eutectic solution
- Fracture analysis of Liquefied Natural Gas (LNG) storage tank
- Two-way piezoelectric linear vibratory feeders
- Forced air cooling on FDM process



使用形狀記憶合金之智能聲波超穎材料
Smart acoustic meta-materials SMA



雙向可控之壓電振動送料機
Two-way piezoelectric vibratory feeder



全3D列印零件組裝之魔術方塊
Rubik's cube consisting of all 3D printed PLA parts