劉 大 佼 教授
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- 台灣大學化工系　學士，民國六十二年
- 紐約科技大學　博士，民國六十八年

- B.S. National Taiwan University, ROC, 1973
- Ph.D. Polytechnic Inst., New York University, 1979

主要研究領域

主要研究領域為先進塗佈技術及產品。目前之研究項目有:

- **光電產品**

  以製作可撓式大面積有機發光二極體之照明元件和其所需高阻水氧的氣阻膜為主。

- **生醫產品**

  研發微針貼劑做為有效之投藥方式，與疫苗等藥物結合。

- **生物可分解膜**

  以廢甘油為主要材料，製作出價格具競爭力之生物可分解薄膜。

- **狹縫式塗佈模具之設計與製作**

  對於薄層塗佈，同時多層塗佈及高黏度懸浮液之塗佈模具進行分析及製作。

Main Research Interests

Covering the process and product developments that are related to coating. Major areas are as follows:

- **Optical-Electronic Products**

  Developing large area flexible organic light emitting diode (OLED) lighting devices and high-performance gas barrier films.

- **Biomedical Products**

  Developing microneedle patches as effective drug delivery systems.

- **Biodegradable films**

  Developing cost-effective biodegradable films with waste glycerol from biofuel production as the major raw material.

- **Slot Die Design and Manufacture**

  Applying advanced modeling techniques to design and manufacture slot dies for optical films, lithium batteries and other products.

代表作 (Selected Publications)

- L.C. Chen, D. Liu, **T.J. Liu***, C. Tiu, C.R. Yang, W.B. Chu, C.C. Wan, "Improvement of Lithium-ion Battery Performance Using a Two-layer Cathode by Simultaneous Slot-die Coating" Journal of Energy Storage, 2015 accepted.
- C.F. Lin, B.K. Wang, S.H. Lo, D. S.-H. Wong, **T.J. Liu**, C. Tiu, "Operating windows of stripe coating" Asia-Pac. J. Chem. Eng. **9**, 134-145, 2014.
- K.L. Lo, C.J. Kao, K.W. Lan, W.Y. Cheng, **T.J. Liu**, "Ink Drop Filling by a Slot Coating Die for an Electrowetting Display Panel" Jnl. Soc. Info. Display., **22**, 337-345, 2014.
- C.C. Liu, W.C. Lu , and **T.J. Liu**, "Transesterification of Soybean Oil Using CsF/CaO Catalysts." Energy fuels. **26**, 5400-5407, 2012.
- J.S.K. Chang, J.R. Shih and **T.J. Liu**, "Curtain Coating of Dilute Suspensions." Polym. Eng. Sci. **52**, 1-11, 2011.
- P.J. Chen, **T.J. Liu**, P.Y. Wu, C.F. Tseng and C. M. Leu. "Drying-Induced Birefringence of Optical Polyimide Films." AIChE J. **56**, 790-800, 2010.