

# 談 駿 嵩 教授

CHUNG-SUNG TAN, PROFESSOR



- 國立中央大學 學士，民國六十二年
- 美國亞歷桑那大學 碩士，民國六十六年
- 美國加州大學戴維斯分校 博士，民國六十九年
- B.S. National Central University, ROC, 1973
- M.S. University of Arizona, USA, 1977
- Ph.D. University of California (Davis), USA, 1980

## 主要研究領域

主要研究方向在分離及反應工程上

### ■ 分離方法方面

- 以超臨界流體或加壓流體反溶劑技術製備微粒、奈米複材、薄膜與觸媒以及自微藻中萃取油脂。
- 於超重力旋轉床中以吸收法或以帶有胺基之中孔吸附材捕獲CO<sub>2</sub>。

### ■ 化學反應工程方面

- 在綠色溶劑如超臨界流體、水或CO<sub>2</sub>膨脹溶液中以自行製備之觸媒進行氫化反應。
- 於綠色溶劑中進行觸媒反應以製備生質燃料如生質柴油及生質航空柴油。
- 發展生質材前處理與水解製程。

## Main Research Interests

My current research focuses on separation technologies and chemical reaction engineering.

### ■ For separation

- Preparation of particles, nanocomposites, film and catalyst as well as extraction of microalgae using supercritical fluid and anti-solvent technologies.
- Capture of CO<sub>2</sub> from flue gases by chemical absorption in a high-speed rotating packed bed or by mesoporous materials grafted with amines.

### ■ For chemical reaction engineering

- Hydrogenation reactions in supercritical fluid, water or CO<sub>2</sub>-expanded solvents using our own synthesized catalysts.
- Production of biofuel such as biodiesel and biojet fuel in green solvent.
- Development of processes for biomass pretreatment and hydrolysis.

## 代表作 (Selected Publications)

- Lu, W.Y., Bhattacharjee, S., Lai, B.X., Duh, A.B., Wang, P.C. and **Tan, C.S.**, "Hydrogenation of Bisphenol A Type Epoxy Resin (BE186) over VulcanXC72 Supported Rh and Rh-Pt Catalysts in Ethyl Acetate Containing Water", I&EC Res., 58, 16326-16337 (2019).
- Yu, W., Huang, J.H. and **Tan, C.S.**, "Purification of Polybutylene Terephthalate by Oligomer Removal Using a Compressed CO<sub>2</sub> Antisolvent", Polymers, 11(7), 1230-1241 (2019).
- Bhattacharjee, S., Lu, W.Y. and **Tan, C.S.**, "A Cleaner Route for Hydrodeoxygenation of Oleic Acid in Hexane Containing Pressurized CO<sub>2</sub> over a MCF Supported Fe-Pd-Ni Trimetallic Catalyst", Fuel, 243, 210-220 (2019).
- Chen, H., Tsai, T.C and **Tan, C.S.**, "CO<sub>2</sub> Capture Using Amino Acid Sodium Salt Mixed with Alkanolamines", Intl. J. Greenhouse Gas Control, 79, 127-133 (2018).
- Chang, H.P. and **Tan, C.S.**, "Poly(methyl methacrylate)-Vapor Growth Carbon Fiber-Graphene Nanocomposites Prepared Using Supercritical CO<sub>2</sub> Mixing and Drying", J. Supercritical Fluids, 130, 311-320 (2017).
- Wu, T.W., Hung, Y.T. and **Tan, C.S.**, "CO<sub>2</sub> Capture from Natural Gas Power Plants by Aqueous PZ/DETA in Rotating Packed Bed", Sep. Purif. Technol., 186, 309-317 (2017).
- Yu, W., Hsu, Y.P. and **Tan, C.S.**, "Synthesis of Rhodium-Platinum Bimetallic Catalysts Supported on SBA-15 by Chemical Fluid Deposition for the Hydrogenation of Terephthalic Acid in Water", Appl. Catal. B. Environmental, 196, 185-192 (2016).
- Yu, C.H., Chen, M.T., Chen, H. and **Tan, C.S.**, "Effects of Process Configurations for Combination of Rotating Packed Bed and Packed Bed on CO<sub>2</sub> Capture", Appl. Energy, 175, 269-276 (2016).

