黄 大 仁 _{教授} TA-JEN HUANG, PROFESSOR

- 國立成功大學 學士,民國六十三年
- 美國諾特丹大學 博士,民國六十九年
- B.S. National Cheng Kung University, ROC, 1974
- Ph.D. University of Notre Dame, USA, 1980



主要研究領域

研究領域:

- 非均匀系催化動力學。
- 二氧化硫及氮氧化物之電動勢促進 分解。

研究題目:

- 以電化學雙電池板及蜂巢(電觸媒 蜂巢)去除氮氧化物之反應機制研究。
- 富氧燃燒廢氣所含二氧化硫及氮氧 化物之電動勢促進分解並回收硫之 研究。

Main Research Interests

- Research Fields:
- · Heterogeneous Catalytic Kinetics.
- Electromotive force-promoted Decomposition of SO₂ and NO_x.

Research Topics:

- Study of reaction mechanism of nitrogen oxides removal by electrochemical double-cell plate and honeycomb (Electro-Catalytic Honeycomb).
- Study of electromotive force-promoted decomposition of SO₂ and NO_x in lean-burn exhausts with sulfur recovery.

代表作 (Selected Publications)

- <u>Ta-Jen Huang</u>, Chung-Ying Wu, De-Yi Chiang and Chia-Chi Yu, "Ambient Temperature NO_x Emission Control for Lean-Burn Engines by Electro-Catalytic Tubes", Applied Catalysis A: Gen., 445-446, 153158, 2012.
- <u>Ta-Jen Huang</u>, Sheng-Hsiang Hsu and Chung-Ying Wu, "Simultaneous NO_x and Hydrocarbon Emissions Control for Lean-Burn Engines using Low-Temperature Solid Oxide Fuel Cell at Open Circuit", Environ. Sci. Technol., 46, 2324-2329, 2012.
- <u>Ta-Jen Huang</u>, Chung-Ying Wu, Sheng-Hsiang Hsu and Chi-Chang Wu, "Electrochemical-Catalytic Conversion for Simultaneous NO_x and Hydrocarbons Emissions Control of Lean-Burn Gasoline Engine", Applied Catalysis B: Environ., 110, 164-170, 2011.
- <u>Ta-Jen Huang</u>, Chung-Ying Wu, Sheng-Hsiang Hsu and Chi-Chang Wu, "Complete Emissions Control for Highly Fuel-Efficient Automobiles via a Simulated Stack of Electrochemical-Catalytic Cells", Energy Environ. Sci., 4, 4061-4067, 2011.
- <u>Ta-Jen Huang</u>, Chung-Ying Wu and Yu-Hsien Lin, "Electrochemical Enhancement of Nitric Oxide Removal from Simulated Lean-Burn Engine Exhaust via Solid Oxide Fuel Cells", Environ. Sci. Technol., 45, 5683-5688, 2011.
- Ta-Jen Huang and Chien-Liang Chou, "Electrochemical NO_x Reduction with Power Generation in Solid Oxide Fuel Cells with Cu-added (LaSr)(CoFe)O₃-(Ce,Gd)O_{2x} Cathode", J. Electrochemical Society, 157, P28-P34, 2010.



