

環境不友善農業廢棄物轉製固態生質燃料技術之開發與應用

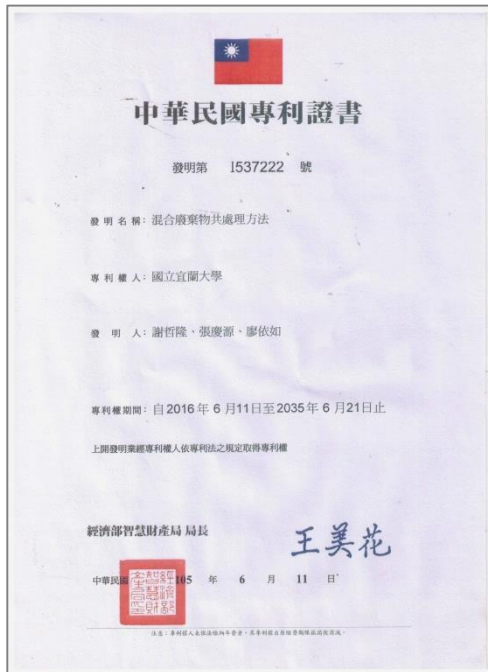
執行單位

中原大學

計畫主持人

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- 本研究以環境不友善農業廢棄物為標的物，經造粒、焙燒等加工方法製成生質煤供作燃料與燃煤混燒使用，或製備生物炭供農業利用，以解決生態環境與創新能源開發。



混合廢棄物共處理方法，中華民國專利第I 537222號 (國立宜蘭大學)

20 kg/hr焙燒生質物暨生物炭量產多段爐系統 (國立中興大學)

- 本研究以環境不友善農業廢棄物為標的物，將其轉製為固態生質燃料，利用本整合計畫之人力及經費，對其間之技術開發與應用做深入之探討，同時藉由本計畫之執行，對環境不友善之農業廢棄物做一瞭解，將其公諸於世，並提出解決之道，以期對我們所處的環境達到節能且友善。
- 本計畫的五個工作任務包括：
 - (1) 環境不友善生質物前處理與造粒及壓密技術開發；
 - (2) 環境不友善農業廢棄物焙燒與炭化製備生質煤量產技術開發；
 - (3) 生質物 / 生質煤與燃煤混燒及其飛灰之特性與再利用之研究；
 - (4) 二氧化碳氛圍下熱處理不環境友善農業廢棄物可行性之研究；
 - (5) 生質煤之農業利用與環境影響評估。

Development and Application of Technologies for Converting Ecofriendly Agricultural Waste into Solid Biofuels

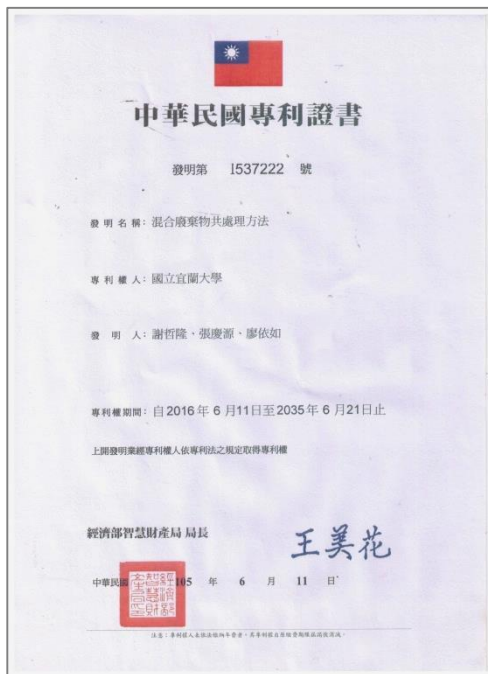
Execution Unit

Chung Yuan Christian University

Project Director

Chien-Song Chyang

- The objectives of this project is to convert the eco-unfriendly agricultural waste through palletization and torrefaction processes into bio-coal for co-firing with coal, and biochar for agricultural utilization.



Co-treatment of Mixed Wastes,
ROC Patent, No. I 537222
(National Ilan University)

20 kg/hr Multiple Stage Furnace for Mass Production of
Torrefied Biomass and Biochar (National Chung Hsing Univ.)



第二期能源國家型科技計畫
National Energy Program-Phase II

- The objectives of this study is to convert the eco-unfriendly agricultural waste into the solid biofuels for further utilization.
- Five tasks were conducted to achieve two aims at once including waste treatment and energy recovery: (1) Development of Pretreatment, Pelletization, and Densification Techniques for Eco-unfriendly Biomass; (2) Development of Mass Production Technology of Bio-coal by Torrefaction and Carbonization of Eco-unfriendly Agricultural Waste; (3) Characteristics of Co-firing of Biomass / Bio-coal with Coal and Properties of Fly Ash Produced with Its Utilization; (4) Feasibility Study of Thermal Treatment of Eco-unfriendly Agricultural Waste under Carbon Dioxide Atmosphere; and (5) Bio-coal for Agricultural Utilization and Its Environmental Impact Assessment.