

中文版





本系吳嘉文教授實驗室楊宜霖及余祐陞同學與環工所侯嘉洪教授實驗室陳采萱及吳偵慈同學所組成的隊伍參加第二屆國際奈米科技奧林匹亞(INO)國內選拔賽獲得冠軍。

第一屆國際奈米技術奧林匹亞 (INO) 是於 2018 年 4 月 10 日至 16 日在伊朗德黑蘭舉行，而第二屆預計於 2021 年 4 月由阿曼主辦，主題是環境永續，競賽內容包含了混合團隊挑戰、團隊作品展示及商業模型。為了選出國家代表隊，本校與教育部、中研院及成功大學合作舉辦了國內選拔賽，內容仿照真實 INO 的比賽模式，將七天的賽程濃縮為三天並於捷絲旅臺大尊賢館進行競賽，最後由本團隊 Professionals of Integrated Operation in Nano-materials, Energy and Environmental Resources 獲得冠軍及代表隊資格，以及二十萬元獎金。

Professionals of Integrated Operation in Nano-materials, Energy and Environmental Resources 是由台大化工系楊宜霖、余祐陞，台大環工所陳采萱及吳偵慈同學組成的隊伍，指導老師則是化工系的吳嘉文教授及環工所的侯嘉洪教授，隊伍名稱代表著能夠統合奈米材料、能源，以及環境資源的專家們，將隊伍名稱第一個字分別拿出來會得到 PIONEER 這個單字。而參賽題目為 Green Sponge Put to Test: Novel Nanomaterials Combines with Modular Electrochemical System against the Water Supply System in Off-grid Area and Emergent Condition. 其中 Green sponge 代表著他們採用所採用的奈米孔洞材料:金屬有機框架(MOF)，它具有高比表面積並且可以吸附多種物質並應用於綠能領域，將金屬有機框架應用於水處理的

領域中，由模組化的電催化及電吸附的系統，搭配太陽能電池提供能量，希望可以解決無電網的地區的供水問題，也對其商業化做了相當多的評估，得到來自科技部、教育部及國衛院等諸多機構之評審委員的肯定。

英文版

Ms. Yi-Ling Yang and Mr. Yu-Sheng Yu from Prof. Kevin C.-W. Wu's lab and Ms. Tsai-Hsuan Chen and Jhen-Cih Wu from Prof. Chia-Hong Hou's lab (Institute of Environmental Engineering) won the first place in the 2nd International Nanotechnology Olympia (INO) Domestic Trial.

The first International Nano Technology Olympia (INO) was held in Tehran, Iran, from April 10 to 16, 2018, and the second is expected to be hosted by Oman in April 2021. The theme is environmental sustainability. The competition includes the mixed team challenge, scientific achievements display and business model. To elect the national team, our university cooperated with the Ministry of Education, Academia Sinica and Cheng Kung University to organize the domestic trial. The content is modeled on the real INO competition mode. In the end, the team Professionals of Integrated Operation in Nano-materials, Energy and Environmental Resources, which belonged to Yi-Ling, Yang and Yu-Sheng, Yu, was chosen as the national team and won a scholarship of 200,000 NTD.

Professionals of Integrated Operation in Nano-materials, Energy and Environmental Resources is a team composed of Yi-Ling, Yang and Yu-Sheng, Yu from the Department of Chemical Engineering of NTU, Tsai-Hsuan Chen and Jhen-Cih Wu from the Graduate Institute of Environmental Engineering. The instructors are Professor Kevin C.-W. Wu from the Department of Chemical Engineering and Professor Chia-Hung, Hou from the Graduate Institute of Environmental Engineering. Their team name can be abbreviated into PIONEER. The topic they presented was Green Sponge Put to Test: Novel Nanomaterials Combines with Modular Electrochemical System against the Water Supply System in Off-grid Area and Emergent Condition. Green sponge represents the nanoporous material they used: Metal-Organic Frameworks (MOFs), which has a high specific surface area and can adsorb various substances and is used in the field of green energy. They applied MOF to a water treatment system containing modular electrocatalysis and electrosorption system powered by solar cells. They hope it can solve the water supply problem in areas without power grids, and have done a lot of evaluations on its commercialization, which has been affirmed by the review committees from many institutions such as the Ministry of Science and Technology, the Ministry of Education, and the National Health Research Institutes.