

“建行杯”第十六届全国大学生节能减排社会实践与科技竞赛港澳台及国际赛道推荐进入决赛作品名单

经专家评审和会议表决通过，共有 40 件作品被推荐进入第十六届全国大学生节能减排社会实践与科技竞赛-港澳台及国际赛道决赛阶段。

具体名单如下（排名不分先后）：

公示时间：7 月 20 日-7 月 24 日

全国大学生节能减排社会实践与科技竞赛委员会秘书处

东南大学能源与环境学院

2023 年 7 月 20 日

List of works recommended for the final of "CCB Cup" the 16th National University Student Social Practice and Science Contest on Energy Saving and Emission Reduction (Hong Kong, Macao, Taiwan and International Group)

After expert evaluation and voting at the meeting, a total of 40 works were recommended to enter the final stage of Hong Kong, Macao, Taiwan and International Group in the 16th National University Student

Social Practice and Science Contest on Energy Saving and Emission Reduction.

The specific list is as follows (regardless of order):

Name of university	Title
Monash University	A Carbon Dioxide (CO ₂) cycle energy storage system based on High-pressure Heat transfer tank with Ejector and Jet devices
Monash University	Carbon Teller: A Data-driven Digital System for Carbon Emission Monitoring from Coal-fired Power Plant
City University of Hong Kong	A high mixing degree - low energy consumption anaerobic corn stalk fermentation mixing scheme design
Monash University	Design Specification for a Boiler Dry Slag Quantity Detection Device Based on Binocular Stereoscopic Vision
Monash University	Pollutant capturer --- Desktop Pollutant High-Efficiency Capture and Purification System Specification
Monash University	Carbon-Negative Hydrogen Production from Biomass Combined with Wind Energy
The university of Auckland	Green Sound: A Solar-Driven Thermoacoustic Power Generator
University of southampton	High flow zero carbon fuel injection device based on high energy ignition
HONG KONG BAPTIST UNIVERSITY	A new building envelope system based on synergistic solar and phase change materials for temperature regulation
University of Twente	Solar Interfacial Evaporation for Seawater Desalination and High Efficiency Water Harvesting System
Cranfield University	Methanol fuel mixture injection - AI high-precision injection control system that provides clean and energy-saving power for commercial vehicles
Monash University	iSTEM Compact Box for waste heat recovery using supercritical carbon dioxide
Arizona State University	"Smart Sunshine" A full-spectrum dynamic adjustable roof solar energy comprehensive energy supply device
University of Minnesota	Fully passive zero-carbon rural single-family housing system
Technological University Dublin	A new type of water-saving toilet suitable for rural areas
University of South Australia	Tracing the source, Travel the future — — Xi'an river beach research and the "three horizontal and one vertical"

	governance model
Auckland University of Technology	Chlorine Inhibitor-Synergistic emission reduction of multiple organic pollutants in flue gas desulfurization process
University of Illinois at Urbana-Champaign	Healthy and energy-saving green nano air purifier
University of Macau	Smart solar moisture collection and power generation device for intelligent flower maintenance
Ibn Tofail university	To reduce carbon with carbon, light and heat responsibility —— A design specification for a multi-purpose constant temperature phase change carbon-based coating based on photothermal conversion
University of Macau	A Sustainable Self-charging Environmental Protection Mask System
Australia national university	The "Green" Voyage - UVMS System for Ship Attachment Cleaning
University of Macau	Design Specification for the Preparation of New Adsorption Materials Using Abandoned Pine Towers
University of Manitoba	Wanderer knows no boundaries
Palacky University in Olomouc	Smell Sight——Air Quality Detection System
University of California, Berkeley (UCB)	High-performance zero-carbon thermal switch
The University of Manchester	"Guardian of Green Harbor——Acdc integrated intelligent shore power pile "design specification
National University of Singapore	Rational design of alloy-based nanoarray for high-performance sodium-ion batteries
Detroit university	energy recovery device for automobile speed bump
Moscow Aeronautical Institute	Soaring High with Hydrogen — Hydrogen Fuel Cell System Based on Coupled Photothermal Power
Soongsil University	Pioneer of snail control 2.0--Eco-friendly intelligent snail control device
University of Cincinnati	HydroShield — A Low-Temperature Plasma Discharge-Based Hydrophobic Modification Device
North South University	Energy-saving and environmentally friendly intelligent sorting garbage bins
Brandeis University	Hydrogen is loaded into the array —— A mobile power supply equipment integrated with a lithium borohydride-based hydrogen source system and fuel cell
Peter the Great St.Petersburg Polytechnic University	Carbon Reduction Future, Green New Life —— Efficient combustion of low concentration gas and carbon de-alkalization of high alkali coal
Macao Institution for tourism studies	Thermoelectric Power Generation - Design Specification of Waste Heat Recovery and Energy Storage Device for Gas Cooker Based on Temperature Difference Generating Power

Hong Kong University	Active-passive integrated zero-energy air conditioning system based on photovoltaic - thermoelectric - radiation cooling
University of Sydney	Elastic ecosystem - sea, land, air smart association on floating island purification
Monash University	"A trickle of residual heat that converges into a source"—— Removable phase change heat storage system based on waste heat recovery from multiple heat sources
California State University	Design manual for a vacuum cryogenic drying system based on solar frequency separation type combined electric heating technology

Publicity time: July 20th to July 24th

Secretariat of the National College Student Energy Conservation and
Emission Reduction Social Practice and Science Contest Committee

School of Energy and Environment, Southeast University

July 20, 2023