

2024 Spring

TIGP Sustainable Chemical Science and Technology Program			
Introduction to Sustainable Chemical Science and Technology			
		Period: 2024/Feb. - 2024/June	
		Classroom: B105, IoC, AS	
		Time: AM9:10-12:00	
Goals:	1. Know the backgrounds and chemistry of sustainability-related issues. 2. Learn the spirit of green chemistry and the challenges/opportunities in the real world. 3. Get exposed to important research directions.		
Theme			
4	Energy Related Technologies		
	4.1 Applied electrochemistry for energy related technologies (including electrode kinetics)	Ho, Kuo-Chuan	2024/2/21
	Peace Memorial Day	No Class	2024/2/28
	4.2 Solar and thermoelectric energy conversion	Chen, Kuei-Hsien	2024/3/6
	4.3 Energy Storage (Lithium ion battery, Flow battery) and Energy Saving Technologies (Photochromic, Electrochromic, Thermochromic)	Yen, Hung-Ju	2024/3/13
5	Greener Materials		
	5.1 Chemicals from Different Feedstocks		
	5.1.2 CO ₂ and Natural Gas	Yu, Steve Sheng-Fa	2024/3/20
	5.1.2 Biomass	Yu, Wen-Yueh	2024/3/27
	5.2 Degradable Polymers	Yu, Jia-Shing	2023/4/3
	*** Midterm report submission deadline ***	No class	2024/4/10
	5.3 From Waste to Wealth (CO ₂ ; E-waste; food waste; plastic waste...)	Yu, Steve Sheng-Fa	2024/4/17
	5.4 Bio-Synthesis	Wang, Cheng-Chung	2024/4/24
	5.5 Green Hydrogen from Sunlight	Wu, Chi-Sheng	2024/5/1
	5.6 Modern theoretical computation applied to energy science	Wu, David Tai-Wei	2024/5/8
6	Sustainable Health - Tackle Disease by Chemistry		
	6.1 Drug Development	Li, Wen-Shan	2024/5/15
	6.2 Disease Detection and Diagnosis	Chen, Yu-Ju	2024/5/22
	6.3 Peptide and probe chemistry in Diseases	Huang, Joseph Jen-Tse	2024/5/29
	6.4 Emergent nanomedicine & diagnostic platforms	Tu, Hsiung-Lin	2024/6/5
	Final Report Submission Deadline	No class	2024/6/12