

## Session B: Metabolic Engineering and Synthetic Biology

June 24 (Saturday), Room MA102, 1<sup>st</sup> floor Management Building I

**10:50** B-1: Using CRISPRi-mediated genes regulation in *Chlamydomonas reinhardtii* for biorefinery

*Pei-Hsun Kao and I-Son Ng\**, National Cheng Kung University, Tainan, Taiwan

**11:05** B-2: Self-regulated 1-butanol productoin in *Escherichia coli* based on the endogenous fermentative control

*Rex C. Wen and Claire R. Shen\**, National Tsing Hua University, Hsinchu, Taiwan

**11:20** B-3: The physiological responses of *Escherichia coli* triggered by phosphoribulokinase (PrkA) and ribulose-1,5-bisphosphate carboxylase/oxygenase (Rubisco)

*Yi-Ling Chen, En-Jung Liu, I-Ting Tseng and Si-Yu Li\**, National Chung Hsing University, Taichung, Taiwan

**11:35** B-4: CRISPR-Cas9 for the genome engineering of cyanobacteria and succinate Production

*Hung Li, Claire R. Shen, Chun-Hung Huang, Li-Yu Sung, Meng-Ying Wu, Mu-En Chung, I-Hsin Yeh and Yu-Chen Hu\**, National Tsing Hua University, Hsinchu, Taiwan

**11:50** B-5: Expression of a metabolic loop enables simultaneous growth and 3-hydroxybutyrate biosynthesis in cyanobacteria

*Jason T. Ku and Ethan I. Lan\**, National Chiao Tung University, Hsinchu, Taiwan

**12:05** B-6: Selection of an endogenous 2,3-butanediol pathway in *Escherichia coli* by fermentative redox balance

*Keming Liang and Claire R. Shen \**, National Tsing Hua University, Hsinchu, Taiwan