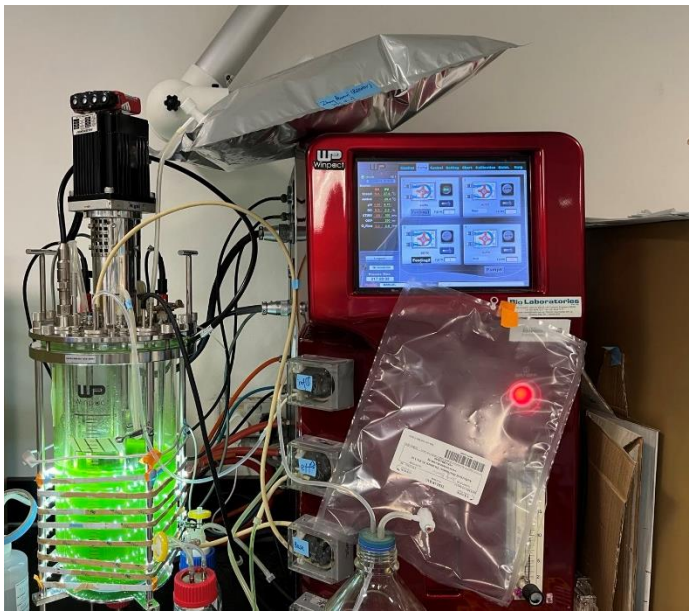
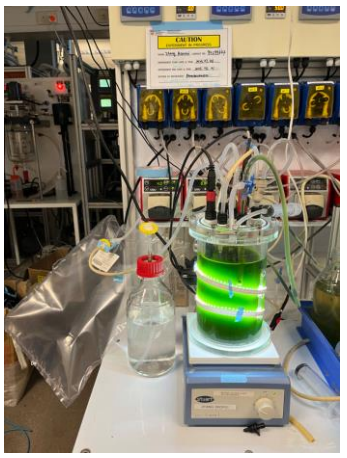
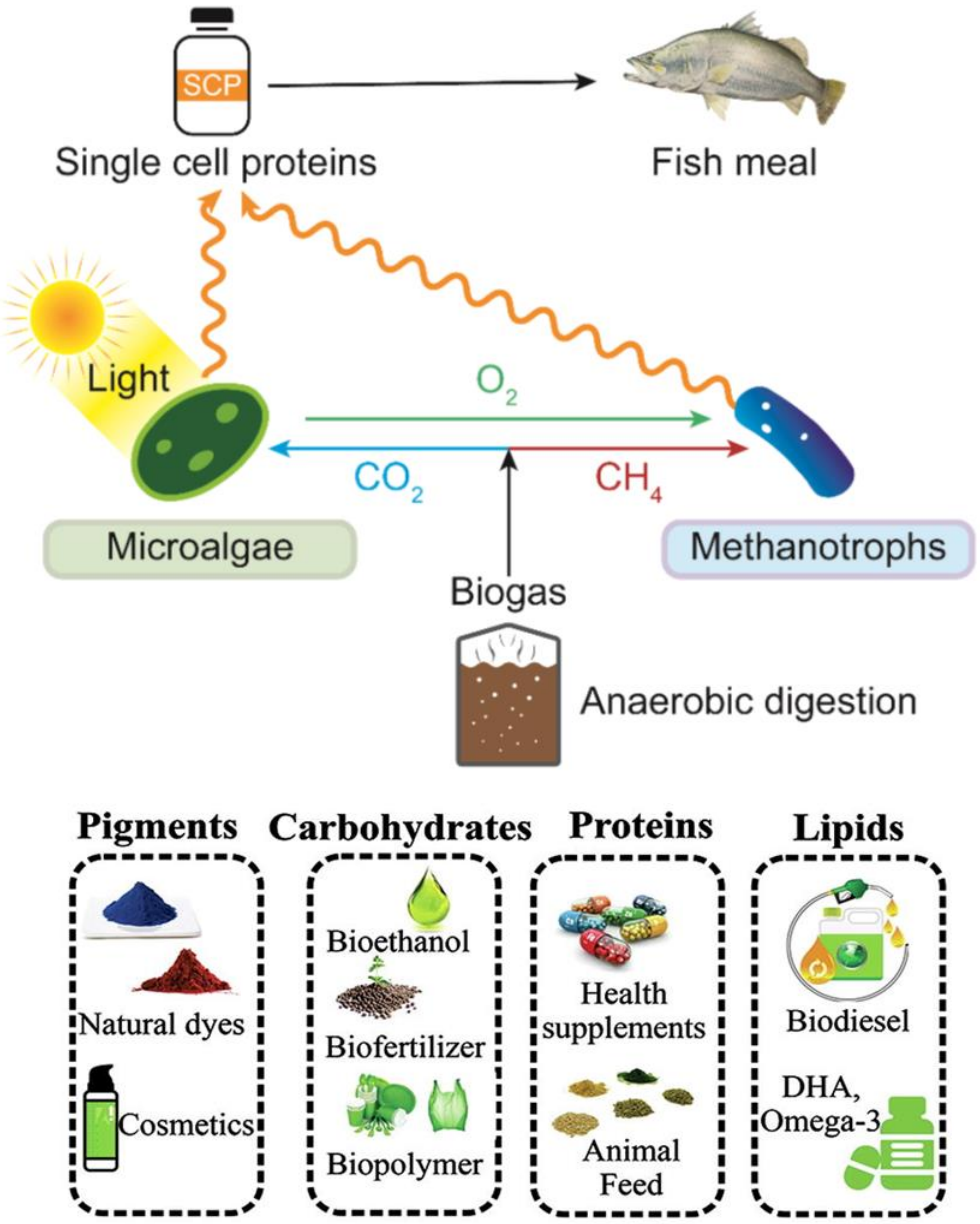
CARBON CAPTURE, RESOURCE RECOVERY, AND HIGH-VALUE BIOMASS PRODUCTION THROUGH A METHANOTROPH-MICROALGAE COCULTURE SYSTEM

PERFORMANCE AND MECHANISMS

- Producing single-cell protein by valorizing greenhouse gases (GHGs) such as biogas not only reduces GHGs emissions but also adds value to those gaseous substances.
- A symbiotic culture of methanotroph and microalgae is ideal for effective transformation of biogas since this coculture can not only maximize the utilization of carbon but also minimize the external energy and oxygen supply.







- The protein content of a biomass of the co-culture is about 50 wt%, of the cellular dry weight of the biomass.
- The proportion of essential amino acids was comparable to plant-based proteins.
- The omega-6 fatty acid, polyhydroxyalkanoate, phytohormone, and carotenoid were identified in the coculture biomass.

Presented by

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