

The Biochemical Engineering Programme

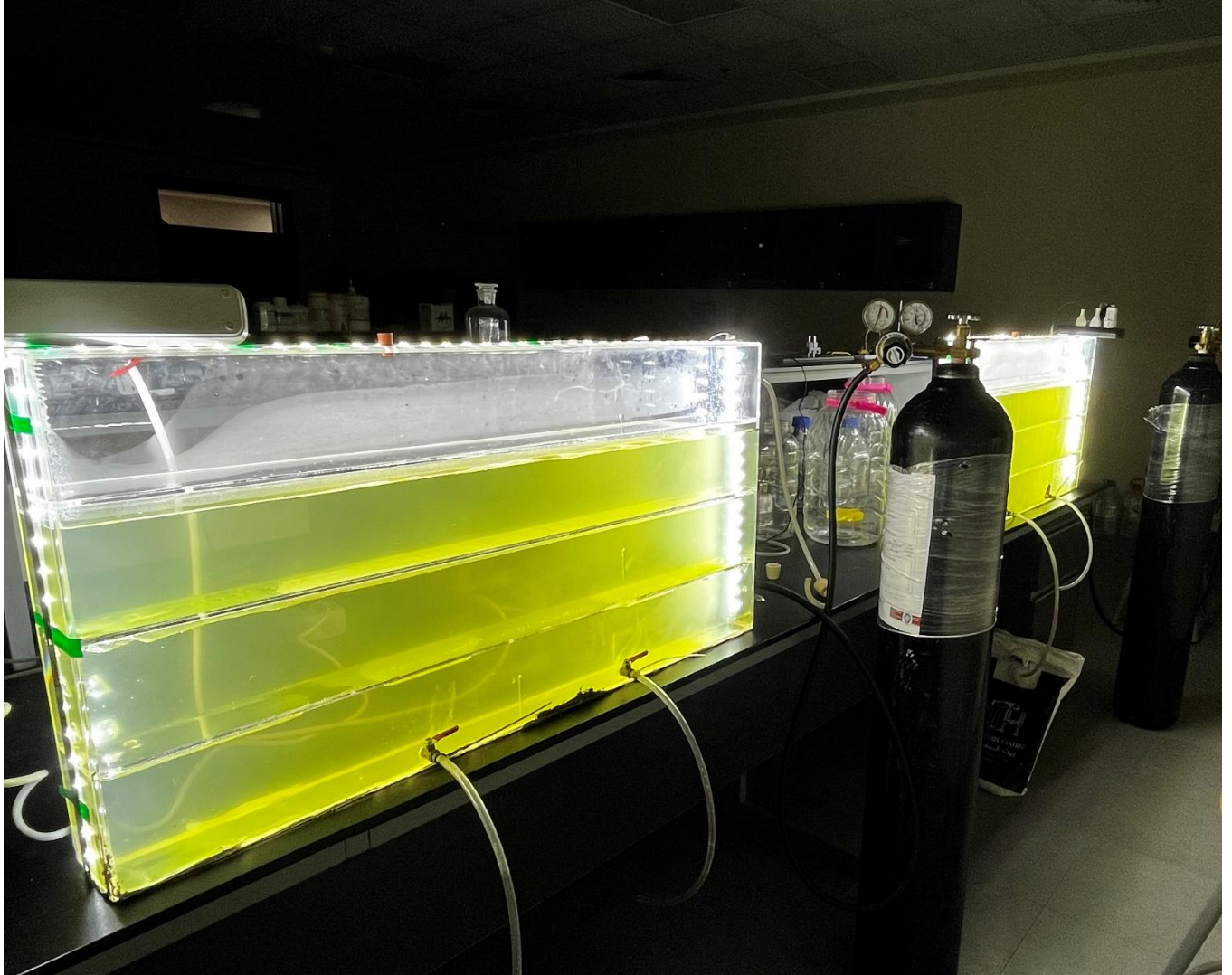


Photo: Photobioreactor utilized for carbon capture and biofuel production using chlorella vulgaris.

The Biochemical Engineering

Program Focus:

Biochemical engineering is the field of study that applies the principles of biology, chemistry, and engineering to translate exciting discoveries in life sciences into practical materials and processes. Biochemical engineers apply cutting-edge technologies to produce useful products such as biofuels, biopolymers, Green-Hydrogen, new chemical products, and industrial enzymes.

Job Opportunities:

Graduates from the Biochemical Engineering Programme are ideally prepared to enter the chemical engineering field with extra credit to the emerging industries in the biotechnology, biofuels, renewable energy, food processing, petrochemicals, environmental remediation and green energy industrial fields.

Modules:

Students through their study years cover a suit of modules that cover the basics as well as the applications of the biochemical engineering field such as (but not limited to):

- Biorenewable energy and hydrogen production.
- Biochemical engineering.
- Microbiology.
- Environmental chemistry.
- Biophysics.
- Bioremediation.
- Organic chemistry.
- Biofuels.
- Bioreactor design.
- Biomaterials science.
- Biotechnology.
- Petroleum bioprocessing.
- Valorization of waste and biomass.
- Water desalination technologies.
- Bioreactor design.

Research:

Faculty members, staff, and students are conducting research on various fronts of the energy field such as:

- Biodiesel production and optimization.
- Wastewater treatment.
- Hydrogen production.
- Biodegradable plastics.
- Carbon capture and storage.