

Research Programmes

PhD in Chemical Engineering or Biotechnology

PhD in Sensor Technologies and Applications (Sensors CDT)

MPhil in Chemical Engineering and Biotechnology

Masters Programmes

MPhil in Biotechnology

MPhil in Advanced Chemical Engineering (ACE)

MPhil in Bioscience Enterprise (MBE)



UNIVERSITY OF CAMBRIDGE

Chemical Engineering and Biotechnology

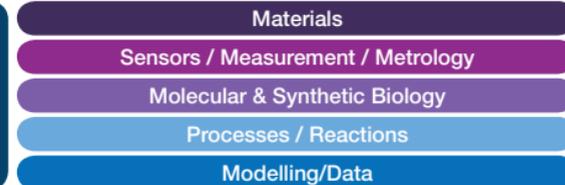
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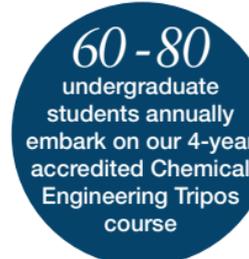
CEB Facts & Figures

Concepts, Fundamentals, Discovery, Knowledge



Energy Health

From Concept to Exploitation

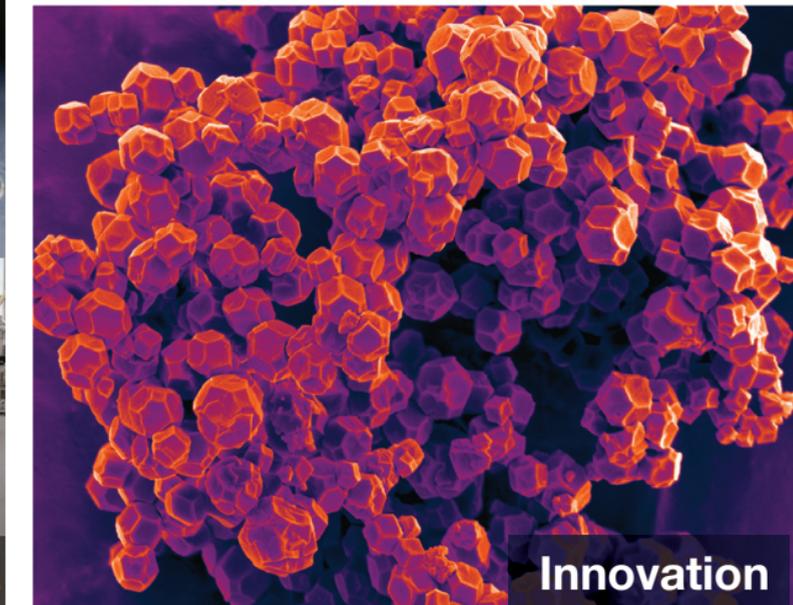


Diversity of research, cutting-edge technology and wealth of multidisciplinary expertise under one roof



CEB Innovation

- Bacon Fuel Cell that took man to the Moon on Apollo Mission.
- Aluminium recovery from laminate packaging
- Magnetic resonance imaging methods for quality control and waste reduction
- Polymer film for fast chromatography
- An innovative nipple guard for nursing mothers in HIV endemic regions
- Novel prosthetic heart valve
- MOFs for greener gas storage
- Terahertz spectroscopy for film thickness measurement
- Blood tests for depression and schizophrenia
- Low-cost disease diagnostic tools in developing countries



Innovation



UNIVERSITY OF CAMBRIDGE

Chemical Engineering and Biotechnology

...with impact

The Department of Chemical Engineering and Biotechnology (CEB)

*CEB draws together expertise
that bridges traditional
boundaries of chemical
engineering and biotechnology
and creating exciting and
unique innovations.*

*Seamless transition
from basic science...*

Concept to Exploitation

...the belief that by understanding the relevant scientific principle upon which the phenomenon is based we can develop innovative, sustainable solutions to important problems in the fields of energy and health.

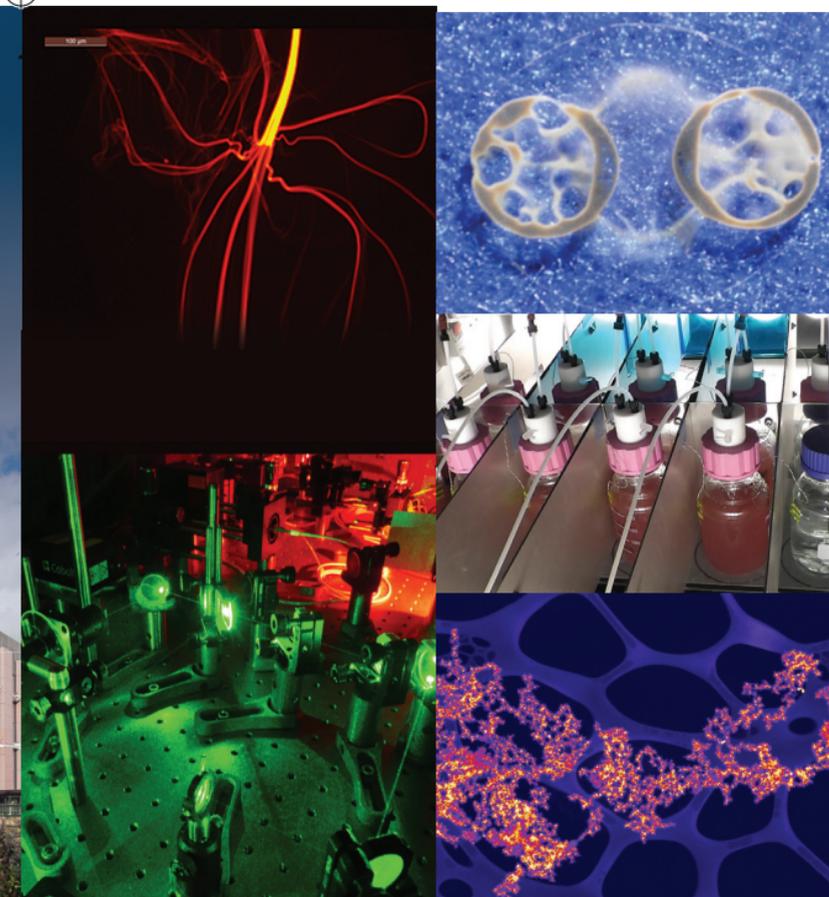
- Promote science of the highest international standard
- Encourage and nurture multidisciplinary research
- Create an ethos of achievement and entrepreneurship
- Provide opportunity for transition from underpinning science to exploitable technology in one organisation



Research Strategy

The Department's research strategy combines core competences to solve challenges of industrial, environmental or social importance, with an agenda encompassing global challenges in Health and Energy.

Research across CEB adopts a whole system approach, taking innovation from Concept to Exploitation C₂X. It is a flagship for interdisciplinary research in Cambridge and a fertile ground for scientific innovation built on fundamental world-leading research which shapes and defines the future direction of Chemical Engineering and Biotechnology, with creative interfaces with other disciplines.



Research Impact

Graduate students and post-docs are encouraged to look for opportunities to exploit their research, and to publicise their work to a wider audience.

CEB is committed to pursuing fundamental research of the highest quality and generating economic and societal impact from that research. The beneficiaries of such impact span the full value chain through industrial collaboration, clinical relationships and spin-offs/start-ups, supported by engagement and media activities to achieve scientific, health and engineering advances.

Social entrepreneurship aligns well with CEB's sustainability agenda, with a number of emerging case studies e.g. waste reduction in solar panel and microchip manufacture, energy recovery in crude oil distillation and delivery of affordable diagnostics in developing countries.



Industrial Collaboration



Industrial collaboration is an important strength of CEB.
We have more than 100 partnerships with on-going relationships and funding (with, inter alia, Shell, Johnson Matthey, MedImmune, Invista) being indicators of success.