IChemE
Institution of
Chemical Engineers

ECCE AB 27

16th European Congress of Chemical Engineering and 9th European Congress of Applied Biotechnology

13–16 September 2027

Edinburgh, Scotland

EFCE

ESBES

Call for papers

Advancing Chemical and Biochemical Engineering for a Sustainable, Digital and Resilient Future

16th European Congress of Chemical Engineering (ECCE) and 9th European Congress of Applied Biotechnology (ECAB) invites researchers, industrial practitioners, innovators, policymakers, and emerging professionals to contribute to Europe's flagship chemical and biochemical engineering congress. Building on the success of previous years, the congress will convene the community to address the scientific, industrial, societal, and workforce challenges shaping the next decade.

We welcome papers, case studies, industrial insights, panel proposals, and visionary concepts that demonstrate technical excellence, real world relevance, and forward looking ambition.

Photography: David Barbour

Core Themes

Energy and the Energy Transition

Chemical and biochemical engineers are central to delivering secure, affordable, and low carbon energy systems.

- Hydrogen systems, electrofuels, and power to X
- Carbon capture, utilisation and storage (CCUS)
- Electrification and high temperature heat solutions
- Industrial defossilisation pathways and transition strategies

Circular (Bio) Economy

Circularity is now a defining principle for modern industry and must become an integral part of everyone's way of life.

- Circular process design and closed loop manufacturing
- Waste to resource (bio)technologies (plastics, biomass, industrial by products)
- Bio based materials and biorefinery systems
- Life cycle analysis, sustainability metrics, and circular business models
- Industrial symbiosis and regional circular ecosystems

Health, Biopharma and Medicine

Biochemical engineering continues to transform healthcare and biomanufacturing.

- Advanced biomanufacturing and continuous bioprocessing
- Cell and gene therapy production
- Process analytical technologies (PAT) and real-time quality control
- Bioprocess modelling, optimisation, and digital twins
- Sustainable and low-impact pharmaceutical production

Food and Drink

The food and drink sector is undergoing rapid transformation driven by sustainability, safety, and consumer expectations.

- Novel food processing technologies and alternative proteins
- Fermentation science and bioprocessing
- Energy-efficient and low-waste food manufacturing
- Food safety engineering, traceability, and contamination control
- Packaging innovation and circular food systems

Digitalisation and Data

Digitalisation is reshaping every aspect of chemical and biochemical engineering. We encourage submissions that integrate digital approaches across all themes.

- AI-driven optimisation and predictive analytics
- Digital twins for design, operation, and workforce training
- Advanced modelling, simulation, and computational engineering
- Automation, robotics, and smart manufacturing
- Data governance, cybersecurity, and digital trust

Photography: Forever Edinburgh

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Skills and Future Competencies

The future of the profession depends on new competencies, new learning models, and new societal expectations.

- Workforce transformation and emerging competency frameworks
- Digital literacy and data fluency for engineers
- Policy, regulation, and societal expectations shaping the profession
- Education innovation and interdisciplinary learning
- Diversity, inclusion, and equitable access to engineering careers

Fundamentals of Chemical and Biochemical Engineering

Foundational research remains essential to innovation.

- (Bio) Reaction engineering, (bio) catalysis, and (bio) reactor design
- Metabolic and enzyme engineering
- Separation processes
- Fluid dynamics, multiphase systems, and transport phenomena
- Thermodynamics, modelling, and simulation
- Materials engineering
- (Bio) Process intensification

Shape the Next Decade

Submission formats encouraged

We welcome high-quality contributions from academia, industry, research organisations, and the public sector.

- Original research and technical developments
- Original research and technical papers
- Industrial applications and case studies
- Cross-disciplinary and cross-sector collaborations
- Novel concepts, emerging technologies, and future direction
- Contributions addressing education, skills, policy, sustainability, and societal engagement in chemical and biochemical engineering

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What are we Looking For?

Submissions should demonstrate:

- Technical rigour and clarity
- Innovation and forward-looking relevance
- Industrial applicability and impact
- Cross-disciplinary insight
- Alignment with sustainability and societal value

Why submit to ECCE/ECAB 2027?

This is Europe's leading chemical engineering congress, offering:

- A platform to showcase high-impact research and industrial innovation
- Access to leading experts, decision-makers, and collaborators
- High-profile plenaries and keynote sessions
- A vibrant exhibition and poster hall
- Opportunities to influence the future direction of the profession
- An exclusive Early Career programme offering opportunities to network with peers from across Europe, build new connections, and develop key professional skills

Submission guidelines and key dates

Authors are invited to submit an abstract through the ECCE/ECAB 2027 online submission system, and each submission should:

- Align with one or more of the ECCE/ECAB 2027 congress themes
- Be submitted under the most relevant theme and topic area
- Follow the abstract template, formatting requirements, and word limits which will be provided during the submission process
- Identify the presenting author and all contributing co-authors
- Indicate a preferred presentation format (oral presentation or poster presentation)

All submissions will be reviewed by the Scientific Committee. Acceptance decisions will be based on scientific quality, technical merit, relevance to the congress themes, and overall programme balance. While authors may indicate a preferred presentation format, the Scientific Committee reserves the right to determine the final presentation format of accepted contributions.

Key dates

Call for abstracts opens:	**25 September 2026**
Early-bird registration opens:	**23 November 2026**
Call for abstracts deadline:	**25 January 2027**
Programme published:	**30 April 2027**
Early-bird registration closes:	**14 May 2027**
General registration opens:	**15 May 2027**
Poster submission deadline:	**30 July 2027**
General registration closes:	**10 September 2027**

All key dates subject to change.

Event **13–16 September 2027**

Find out more

Visit www.ecce-ecab2027.org to find out more about presenting at ECCE/ECAB 2027, how to submit an abstract, and key deadlines.

If you have any questions, or would like to discuss your proposed topic before submitting an abstract, contact us at ecce-ecab@icheme.org

Sponsorship & exhibition opportunities

For those interested in enhancing their visibility and showcasing products or services, ECCE/ECAB 2027 offers a range of sponsorship and exhibition packages to suit all budgets.

Find out more: www.ecce-ecab2027.org/sponsorship

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IChemE is a registered charity in England and Wales, and a charity registered in Scotland (SC 039661)

www.ecce-ecab2027.org