

Press release

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Danckwerts Lecture addresses molecule-to-process design

The prestigious 2025 P.V. Danckwerts Memorial Lecture will be delivered by **Claire S. Adjiman**, FREng FICHEM, Professor of Chemical Engineering and Director of the Sargent Centre for Process Systems Engineering at Imperial College London, United Kingdom.

The Danckwerts Lecture will be delivered on **Tuesday, 9 September 2025**, 9:00 a.m. at the 15th European Congress of Chemical Engineering (ECCE15) which will be held in Lisbon, Portugal, on 8-10 September 2025.

The title of the plenary presentation is "**Molecular Systems Engineering for Product and Process Design**".



Claire Adjiman is internationally recognised for her pioneering research in Molecular Systems Engineering, which has led to more sustainable products and processes. Her group has proposed novel algorithms to solve integrated design problems in pharmaceutical process and product development, solvent-based carbon dioxide (CO₂) capture, and fuel cell design. They improved models and algorithms to predict physical properties from molecular structure and proposed theoretical and algorithmic advances to solve nonlinear optimisation problems with continuous and discrete decisions, a common class in chemical engineering.

Among others, her computer-aided molecular and process design approaches have been adopted in the agrochemical and pharmaceutical industries to improve reaction design, reduce environmental impact and increase safety, including to identify solvents that suppress toxic side products such as hydrogen cyanide.

The Danckwerts Lecture was established in 1985 to honor Professor Peter V. Danckwerts as a leading scholar in the field of chemical engineering and for his contributions as an Executive Editor of *Chemical Engineering Science*, the second Shell Professor of Chemical Engineering at the University of Cambridge, and past president of the Institution of Chemical Engineers (IChemE).

The Danckwerts Lecture is co-sponsored by **Chemical Engineering Science**, **IChemE**, **AIChE**, and **EFCE**, and is held in alternating years at the ECCE and AIChE meetings."

Ends

Related links

EFCE media centre (<https://efce.info/News>)

P.V. Danckwerts Memorial Lecture (https://efce.info/Danckwerts_Lecture.html)

15th European Congress of Chemical Engineering (ECCE15)
(<https://ecce-ecab2025.eu>)

Notes to media

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About chemical engineers

Chemical, biochemical and process engineering is the application of science, maths and economics to the process of turning raw materials into everyday products. Professional chemical engineers design, construct and manage process operations all over the world. Oil and gas, pharmaceuticals, food and drink, synthetic fibres and clean drinking water are just some of the products where chemical engineering plays a central role.

About EFCE

Founded in 1953, The European Federation of Chemical Engineering (EFCE) is a non-profit-making association, whose object is to promote co-operation in Europe between non-profit-making professional scientific and technical societies in 30 countries for the general advancement of chemical engineering and as a means of furthering the development of chemical engineering. See <https://efce.info>