



THE UNIVERSITY *of* EDINBURGH  
School of Engineering

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## 60 Years of Chemical Engineering

### *Inaugural Lecture*

# Energy, exergy and how we can achieve a low carbon economy

**Professor Stefano Brandani**

**Monday 19 September 2016 at 5.30pm**

**Swann Lecture Theatre  
Darwin Building  
The King's Buildings**

*This lecture marks the closing celebrations for the 60 years  
of Chemical Engineering at the University of Edinburgh*

**[www.chemical-engineering-jubilee.eng.ed.ac.uk](http://www.chemical-engineering-jubilee.eng.ed.ac.uk)**



As a society we are faced with the constant challenge of improving quality of life and economic prosperity, which correlates often with energy production, while at the same time minimising the impact of our activities on the environment. The UK, with the 2008 Climate Change Act, has set a legally binding target of reducing emissions of greenhouse gases by 80 per cent by 2050. The talk will consider energy production for all applications: electricity; manufacturing and chemical industry; transport and heating. Examples taken from research carried out in the School of Engineering will be used to show possible approaches for decarbonising our economy and the talk will conclude with a short discussion of the challenges of removing carbon dioxide directly from the atmosphere, something that may be needed if we are to meet the commitments set by the 2015 United Nations Climate Change Conference (COP21) in Paris.