

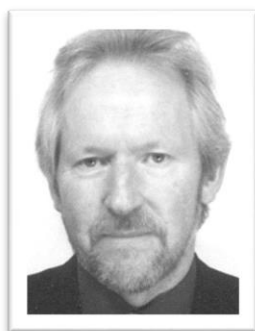


PLENARY SPEAKER ESCAPE27

ABSTRACT

Monday, October 2nd | 14:30-15:30 - Room C1

Title: Process Integration: Current Status and Future Challenges



Prof. Robin Smith, Manchester University, Manchester, UK.

Process integration has traditionally focussed on the design, optimization, operation optimization and control of chemical and biochemical processes, relating to processes in the petroleum, petrochemical, chemical, pharmaceutical and food processing industries.

The emphasis is on a holistic approach to processes, rather than concentrating on individual operations, or the phenomena occurring in individual operations. The research in process integration started in the late 1970s with an emphasis on energy efficiency. The early focus was on systematic methods for the design of heat exchanger networks. Later, the ideas and techniques developed to solve the heat exchanger network problem provided the basis for the extension of the methodology into other aspects of process design, such as minimization of water and wastewater. There have been many industrial successes. However, broadening the horizons of process integration has the potential to contribute to global challenges, such as the energy-food-water nexus.