TRAINING COURSE

Advances in Chemicals Sustainability

Advances in sustainable chemistry are essential to the environmental and climate challenges we face. The course offers participants an overview of advances in sustainable chemical production and an understanding of how the markets are reacting to these developments.

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1. Agricultural Background & Biofuels

- Legislation overview
- Routes to gasoline, diesel/aviation fuel blending
- Biogas developments, Bio-methanol; RFNBOs – eFuels, hydrogen, etc.
- Market overview, Manufacturing costs
- Carbon footprint and availability of petrochemical feedstocks

2. Plastics Recycling

- Scoping the challenge, legislation overview
- Market overview and development
- Technology Solutions; Mechanical; Pyrolysis; Depolymerization;
- Dissolution; Gasification; New developments hydrothermal liquefaction, etc.
- Production economics; Carbon footprint implications

3. Biodegradable Polymers

4. Agri Bio-based Plastics & Intermediates

5. Carbon Dioxide

- Market overview and development, major sources
- Technology solutions for CCS/CCSU and re-use
- Air capture, Amine systems, colored methanol
- Screening emerging applications
- Comparative production economics

6. More Sustainable Petrochemical Building Blocks

- Definitions, Legislation overview as appropriate
- Market overview and development – focus on production.
- Low carbon building blocks and footprint
- Alternative approaches to reduction in scopes 1, 2, and 3.
- Comparative production economics
- Impact of developments in CO_2 pricing on competitiveness