

## TRAINING COURSE

### Petrochemicals – Adding Value By Going “Downstream”

#### Opportunities and Challenges of Higher Value, Low Volume Market Segments

*In the world of large volume commodity resins, such as the polyolefins, vinyls, and styrenics, winners and losers are often determined by access (or not) to cheap feedstocks such as in the Middle East and North America. Consequently, producers in other parts of the world are necessarily becoming more and more interested in second and third level derivatives as a means to add value. This new course will explore a wide variety of some of these downstream products.*



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#### 1. Key Non-Commodity Ethylene Derivatives

– EO/MEG

– LAOs

#### 2. Key Non-Commodity Propylene Derivatives

– Cumene value chain

- Phenol/acetone/BPA
- Polycarbonate
- Epoxy resins
- PF resins
- MMA/PMMA

– Propylene oxide

– Oxo alcohols

- Acrylic acid/Acrylates/SAPs
- Acrylonitrile
- Placing the current industry structure into historical perspective

#### 4. Key Non-Commodity C4 Derivatives

– Natural Rubber versus Synthetic Rubber

- PBR/SBR, Butyl, EPDM, NBR, IR

– MEK

– Maleic anhydride/UPRs

– 1,4-BDO/THF/GBL/NMP/PVP

– MTBE

#### 5. Key Non-Commodity Aromatic Derivatives

– ABS

– Nylon 6,6 and Nylon 6

– Polyurethanes

- MDI/TDI
- Polyether polyols

#### 6. Key Non-Commodity C1 Derivatives

– Syngas/Methanol

– Acetic acid/VAM, PVAc, PVB

– Formaldehyde

- UF/PF/MR Resins
- Polyacetals