

TCGR's In-House Training Courses: Focus on "The Catalyst Industry"

*Taking Your Team "Beyond the Basics" with Practical,
Real World Expertise and Knowledge...*

INTRODUCTION

- What is Catalysis?
- Why is it so Important?

BRIEF HISTORY OF CATALYSIS

- The Beginning: H₂SO₄
- The Industrialization: 1900 to 1940
- The Expansion: 1940 to Current
- The Future: Current to 2025, and Beyond

THE LOGISTICS AND BUSINESS OF CATALYSIS

- Industry Structure
- Licensing and Process Development
- Evolution and IP Generations
- Commercial Value Chain

THE CATALYST BUSINESS – MARKET APPLICATIONS AND SUPPLIERS

- Refining
- Petrochemicals/Chemicals
- Polymerization: Thermoplastics and Others
- Environmental: Mobile and Stationary
- Fine Chemicals/Pharmaceuticals
- Other Emerging Applications
 - Consumer; Electronics; Batteries/Storage; etc.

CATALYST COMPANY AND INDUSTRY PARTICIPANT

PROFILES, SWOTS

- The Majors The Start-ups
- The Others The Regionals

R&D/SCIENTIFIC ADVANCES, BY MARKET APPLICATION

- Refining
- Petrochemicals/Chemicals
- Polymerization: Thermoplastics and Others
- Environmental: Mobile and Stationary
- Fine Chemicals/Pharmaceuticals
- Other

FACTORS INFLUENCING CATALYSTS/CATALYSIS

- Macroeconomics, Regional Influences
- Governmental Regulations
- Innovation, R&D and IP Developments

MARKET RESEARCH, COMPETITIVE INTELLIGENCE AND SOURCES OF INFORMATION

- Key Industry Sources and References
- How to Spot Trends/Opportunities in Information
- Government (e.g., EU, NIST, DOE and Other) Programs, R&D/Venture Funding Worldwide
- Other

"BEYOND THE BASICS": ADVANCED ISSUES AND CHALLENGES

- Catalyst Plant Operations and Know-How (real world, hands-on)
- Partnerships, Alliances, Joint Ventures, etc.
- Key Linkages: R&D/Technology to Process/Product
- Strategic Considerations and Implications (e.g., licensor vs. producer)

Q&A, WRAP-UP

*This Preliminary Outline is entirely customizable based on client interests/needs. The **In-House Training** can be conducted on-site or remotely over several hours or several days with full documentation (e.g., workbook, video, etc.) available afterwards. Instructors are selected from TCGR's DIALOG GROUP® of industry experts and are pre-approved by the client.*

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The TCGR In-House Training Solution... *The Catalyst Group Resources (TCGR), a member of The Catalyst Group (TCG), is dedicated to monitoring and analyzing technical and commercial developments in the applied catalysis industries. Through multi-subscriber studies, annual subscription services, confidential membership programs, and technical/ commercial conferences/workshops, TCGR delivers timely, insightful, value added services that can be used to achieve a competitive advantage. Our industry experience is unparalleled. The Catalyst Group's unique competency of aligning technical understanding with market and commercial implications makes it a valuable resource to a diverse spectrum of process-industry segments.*



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