

**L. Louis Hegedus**  
*Senior Vice President, Research and Development*  
*Arkema, Inc.*

**Biography**

L. Louis Hegedus, Ph.D., is Senior Vice President of Research and Development, for Arkema Inc. (formerly Atofina Chemicals, Inc.). He is responsible for all research and development (R&D) in North America and R&D coordination between the U.S. and France. Arkema research supports the company's businesses in Thiochemicals, Organic Peroxides, Fluorochemicals and Hydrogen Peroxide, Additives, Technical Polymers, and polymethyl methacrylate.

Prior to joining the Company in 1996, Dr. Hegedus was Vice President of the Corporate Technical Group at the Washington Research Center of W.R. Grace. His 16 years of experience with that company included different positions as Director of Inorganic Research and Vice President of Research for the company's specialty chemicals businesses.

Prior to joining W.R. Grace, Dr. Hegedus was affiliated with the General Motors Research Laboratories, where he managed research on the development of the catalytic converter for automobile emissions control. His previous employment with Daimler Benz AG in Mannheim, Germany, as Group Leader of the Materials Testing Department was followed by attendance at the University of California, Berkeley, from which he received his Ph.D. in Chemical Engineering. His earlier education was completed at the Technical University of Budapest, where he obtained his M.S. in Chemical Engineering.

Dr. Hegedus has produced 75 publications and patents, mainly in chemical reaction engineering and industrial catalysis. His honors include the Catalysis and Reaction Engineering Practice Award by the American Institute of Chemical Engineers (AIChE), an honorary Doctor of Engineering from the Technical

**Dr. Joseph V. Porcelli**  
*President*  
*JVP International, Inc.*

**Biography**

Joe Porcelli founded his consulting firm, JVP International, Inc. in 2001, after retiring as President and CEO of Scientific Design Company, Inc. His consulting practice has concentrated on the evaluation of proposed R&D projects and the auditing of the progress and readiness for commercialization of R&D projects, for petrochemical and catalyst companies, as a sub-contractor to other consulting companies, as well as the U.S. Department of Energy. He is particularly knowledgeable in the field of heterogeneous catalysis and process development and licensing, both from a technical and a business standpoint.

During his 40-year career at Scientific Design and its former parent company, Halcon International, Joe led various R&D functions, and had major responsibility for SD's ethylene oxide technology. He consulted on plant startups and troubleshooting in the US, Europe and Japan and ran SD's tri-annual international EO Licensees meetings. Joe also managed the catalyst business of Halcon International, and he also served as Halcon's last President, managing the downsizing and eventually sale of various Halcon businesses and technology packages.

Joe is currently the Vice President of Finance of Société de Chimie Industrielle, American Section, and previously served on the Board of the American Institute of Chemical Engineers. He is a Fellow of AIChE, and a member of the American Chemical Society, the ChemPharma networking group and is President of the Association of Consulting Chemists and Chemical Engineers, Inc.

University of Budapest, and the Professional Progress and R.H. Wilhelm Awards from the American Institute of Chemical Engineers. He is a fellow of the AIChE, a member of the National Academy of Engineering (NAE), a past Chairman of the NAE's Chemical Engineering Section, and a past Chairman of the Council for Chemical Research. As a member of the Board on Chemical Sciences and Technology, he chaired the National Research Council's Report on Critical Chemical Technologies. Dr. Hegedus is a member of the Advisory Board of Chemical and Engineering News (ACS).

# Introductory Remarks

## AICHE-ACS Management Conference

Cincinnati, OH Nov. 4, 2005

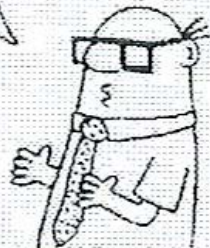
L. Louis Hegedus  
Arkema Inc.  
Conference Chairman



The highest task of intelligence is to grasp and recognize genuine opportunity.

John Dewey

ONE OUT OF TEN  
RESEARCH AND  
DEVELOPMENT  
PROJECTS WILL  
SUCCEED.

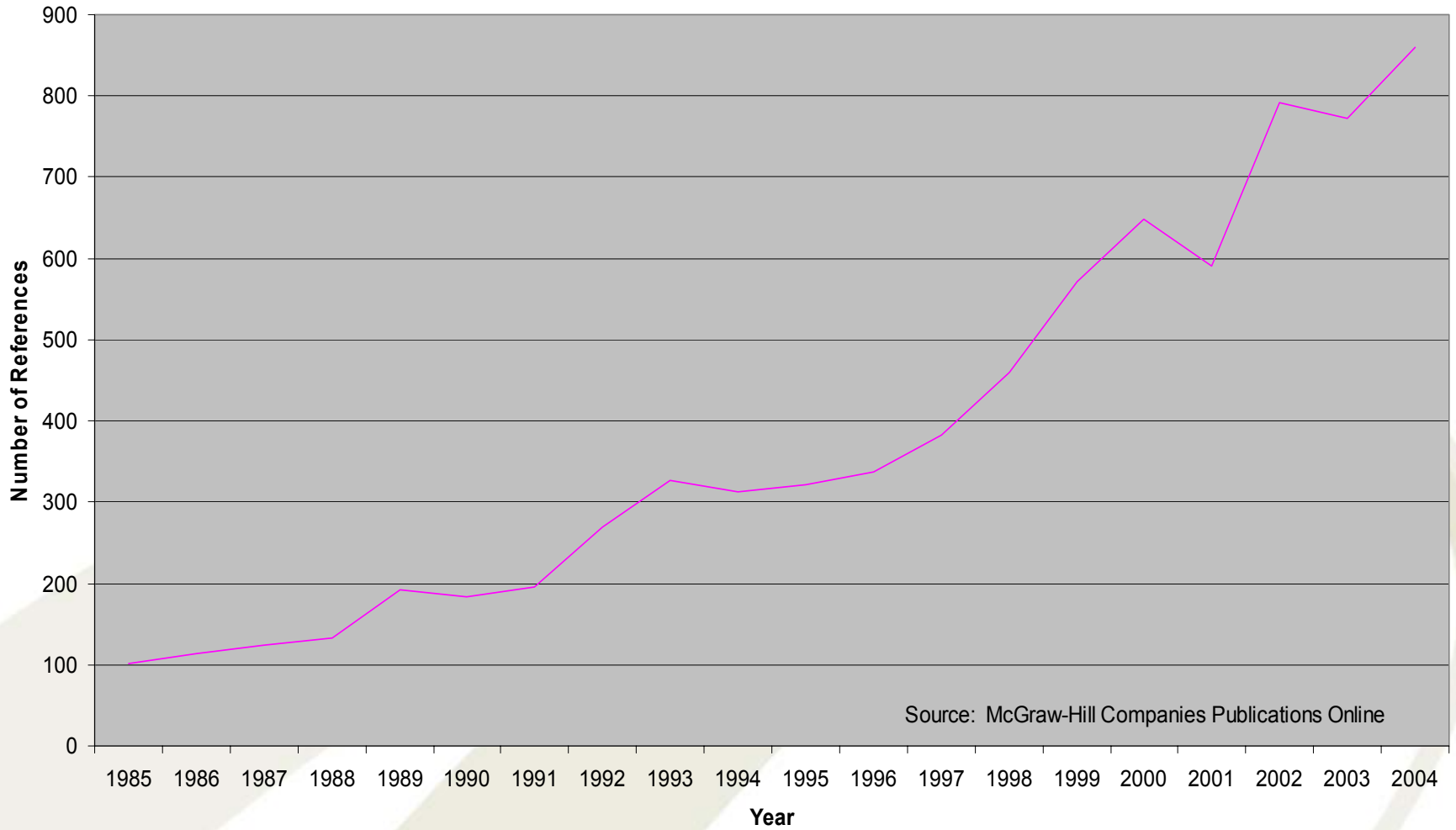


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I RECOMMEND  
CANCELLING  
THE OTHER  
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# References to "Innovation"



# Chemical Industry Challenges

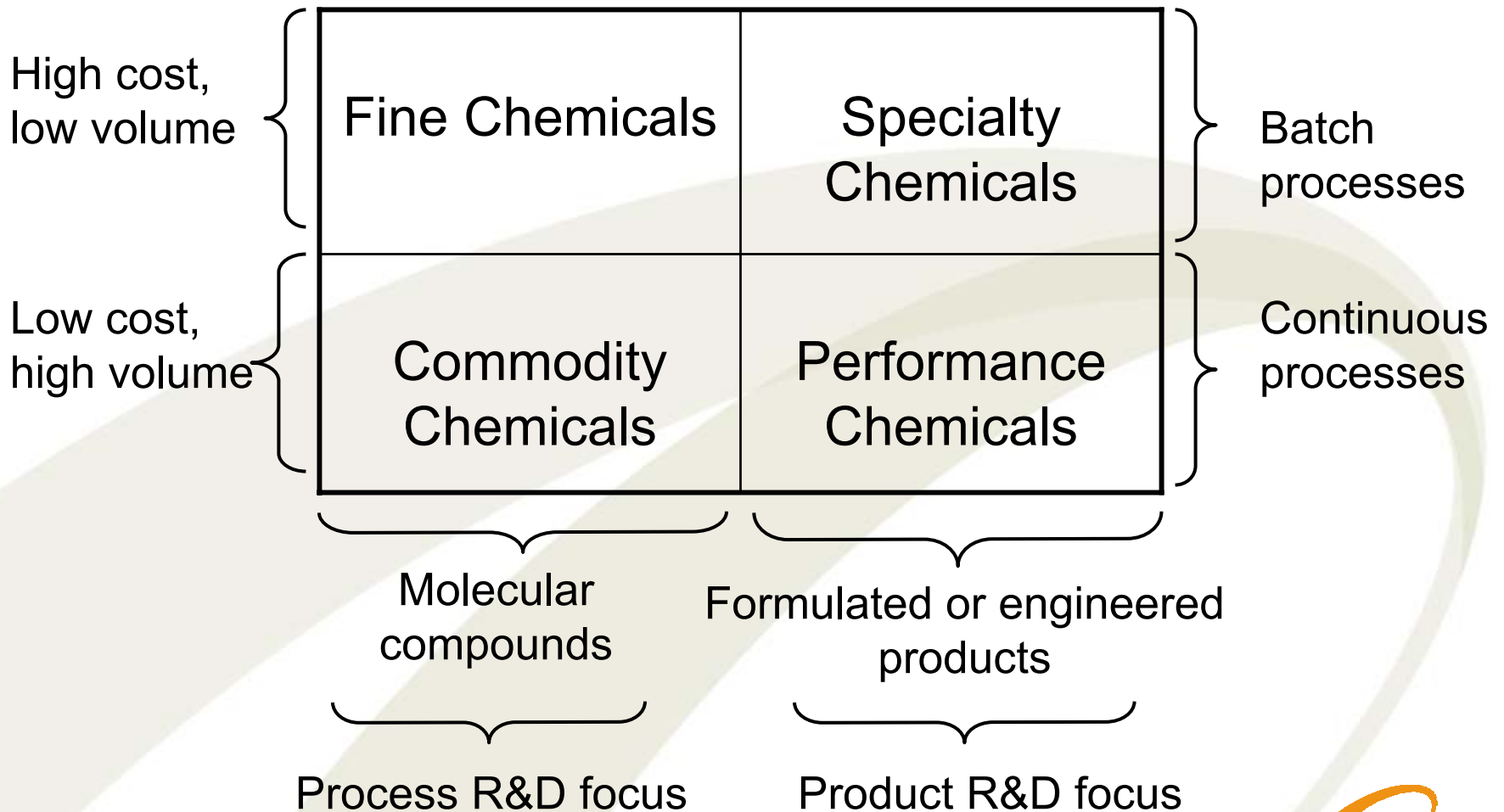
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- Growth
- Globalization
- Environment and Sustainability
- Profitability and Return on Capital
- Customer Orientation
- Changing Work Force

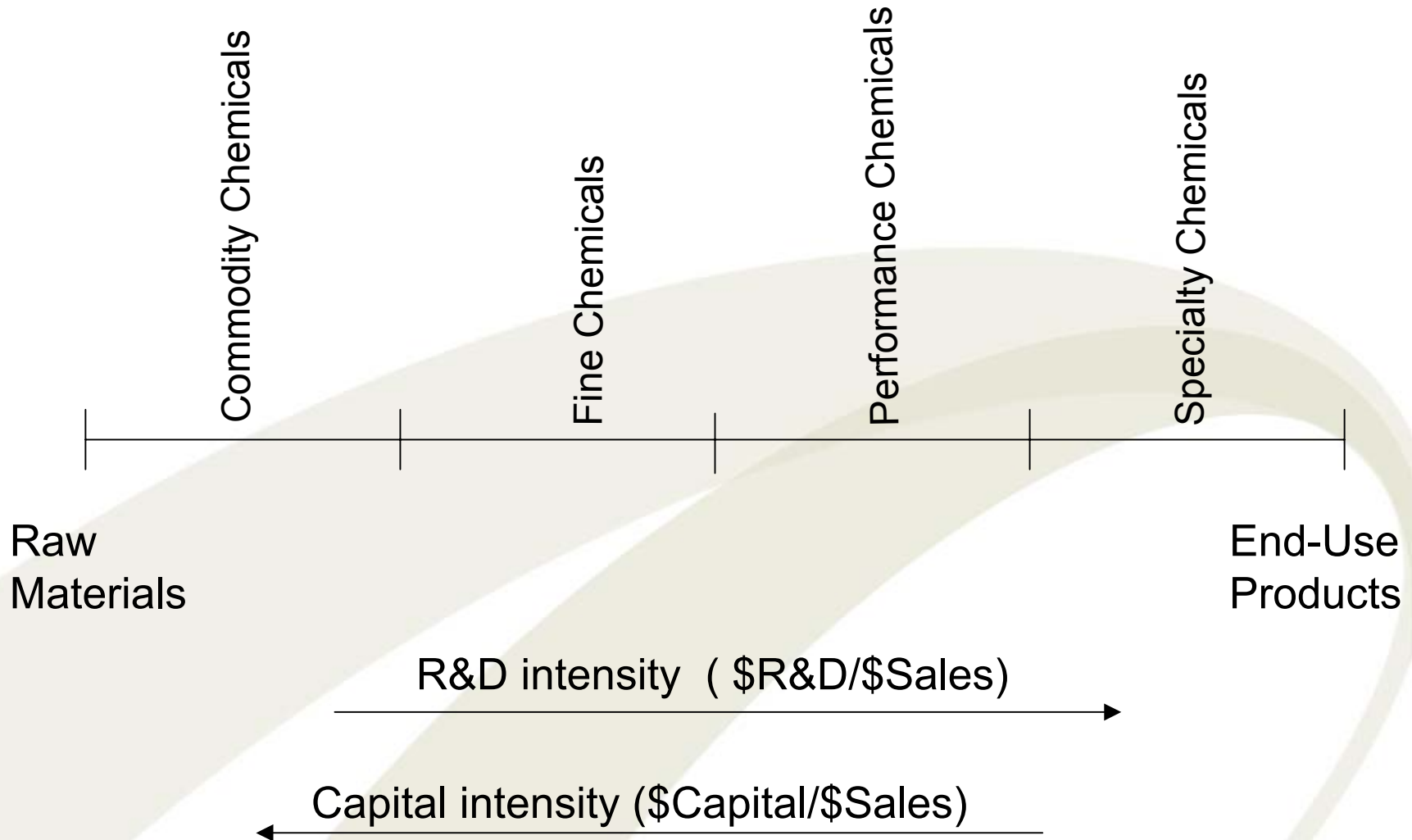


# The World of Chemicals

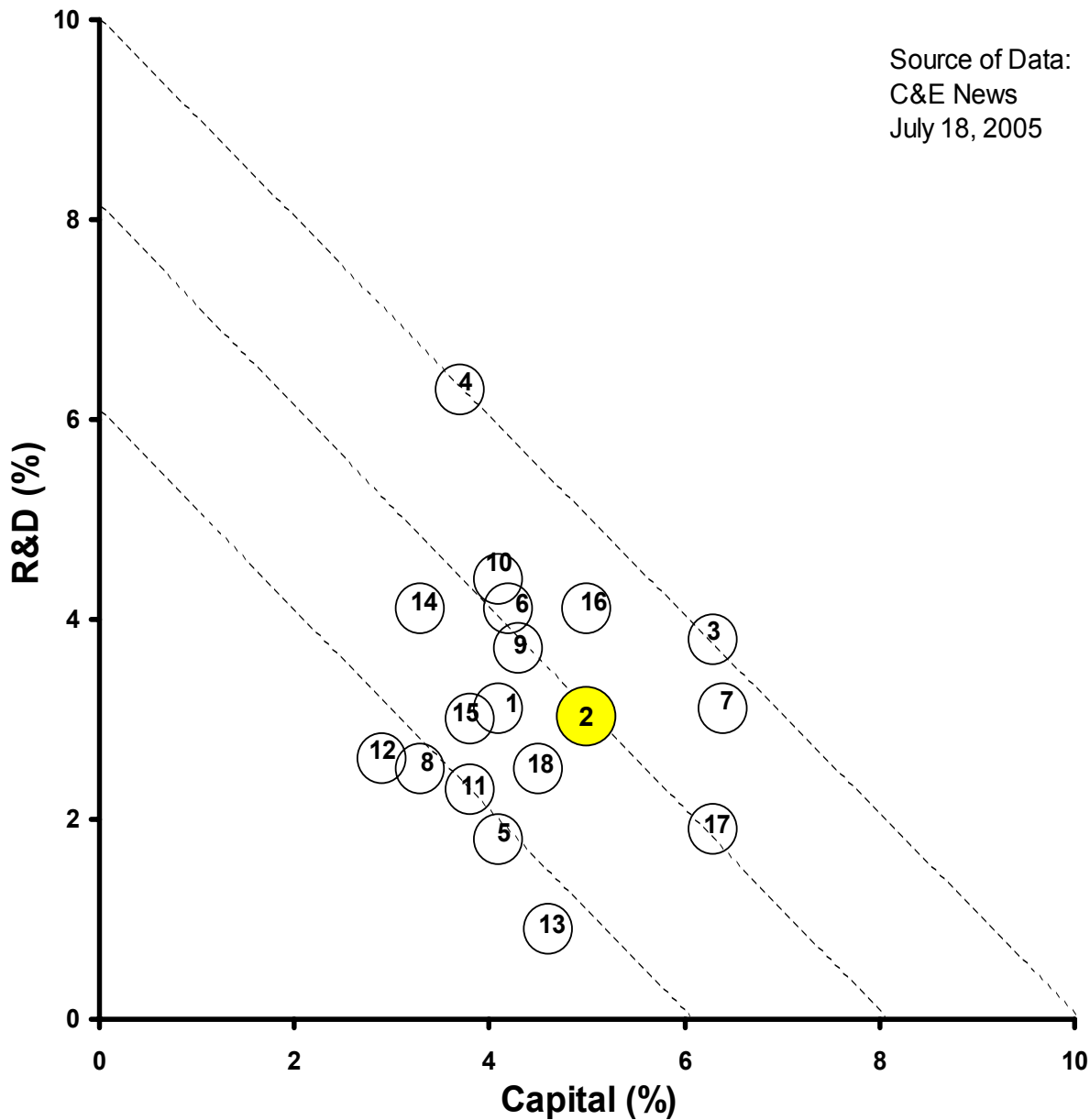
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# The Chemical Value Chain

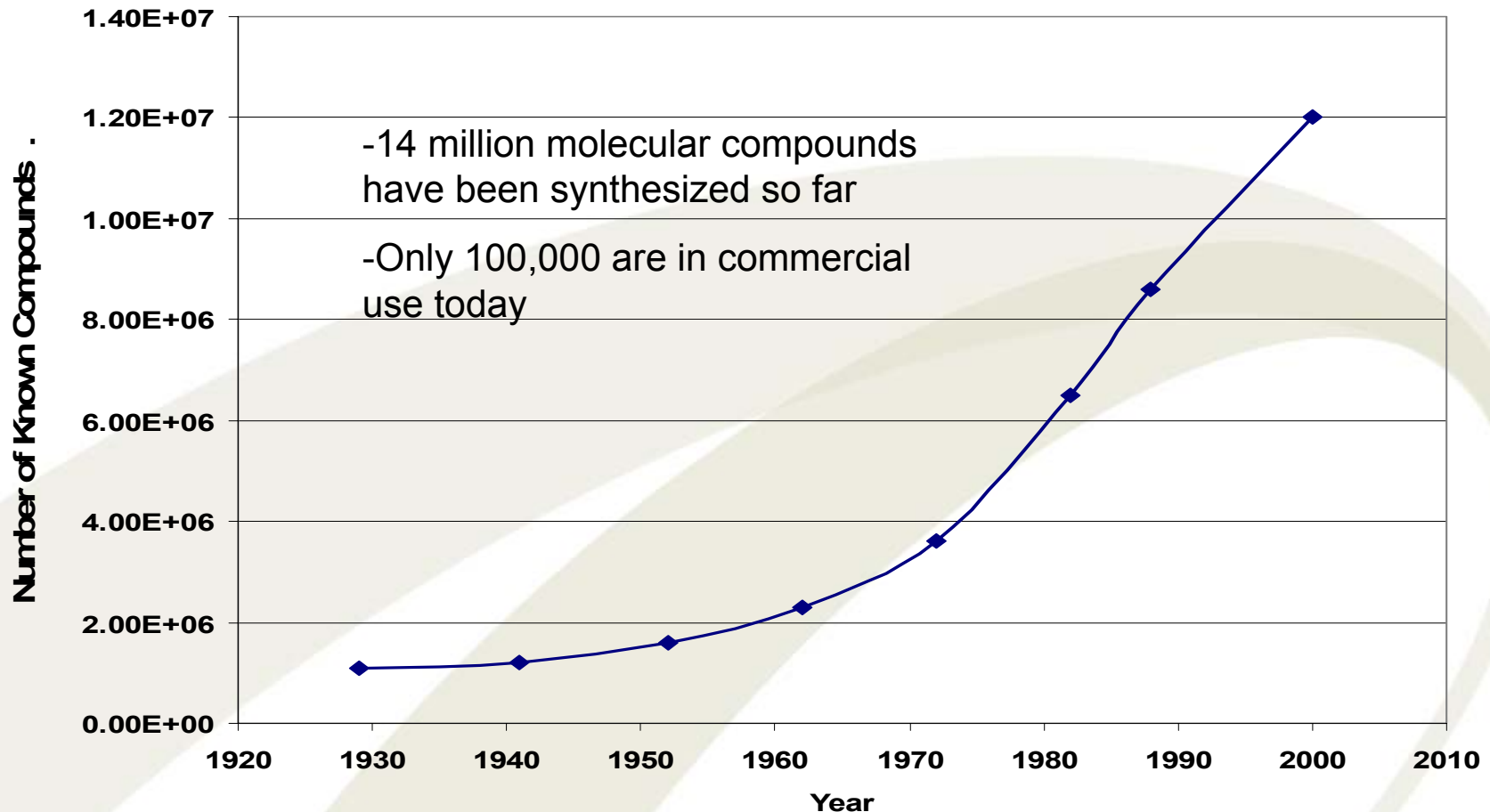


# R&D and Capital Intensity of Selected Chemical Companies as % of Sales



- 1 Akzo Nobel
- 2 Arkema
- 3 BASF
- 4 Bayer
- 5 Celanese
- 6 Ciba Specialties
- 7 Degussa
- 8 Dow
- 9 DSM
- 10 DuPont
- 11 Eastman Chemical
- 12 ICI
- 13 Nova Chemicals
- 14 PPG
- 15 Rhodia
- 16 Rohm & Haas
- 17 Solvay
- 18 Total (Chem. Only)

# The World of Chemical Products is Literally Endless



Source: Charpentier, 2002

# “NANO”

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