

THE REPORT

Industrial processing typically requires the use of hazardous chemicals as solvents, catalysts, and starting materials for end product chemical synthesis. Furthermore, many industrial end product synthesis reactions are inefficient and produce toxic by-products in the form of volatile organic compounds (VOCs). The presence of toxic by-products and non-biodegradable end products creates the need for costly waste management programs integrated into the corporate infrastructure. Government sponsorship of environmental regulations and research efforts to reduce industrial pollution have fostered the development of "green chemistry."

Green chemistry is defined by the United States Environmental Protection Agency as, "**the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances.**" Industries can comply with the principles of green chemistry by using alternative synthetic pathways, creating alternative reaction conditions, or designing safer chemicals that have little or no environmental toxicity. Typically, these chemicals are synthesized from natural renewable feedstocks. Industrial adaptation of green chemistry technologies can prevent pollution, maximize efficiency, and reduce waste.

The **Green Chemistry Processing Technologies** report includes detailed information on novel green chemistry technologies that are currently available for licensing, co-development, and co-marketing. These technologies represent green chemistry advances that are used in chemical production and processing. In the report, each technology is profiled with the full contact information, technology description, competitive advantage, intellectual property information, and stage of development. It also contains a discussion of the industrial economic benefits of green chemistry technologies including legislative compliance allowances, tax rewards, and infrastructural reassessments. The report is fully customizable to specific client needs.

PRELIMINARY TABLE OF CONTENTS

Executive summary

Introduction

- Technology overview
- Government sponsorship programs
- Research and industry consortia

Economic benefits

- Legislative compliance allowances
- Tax rewards
- Infrastructural reassessments

Green solvent technology profiles

- Soy and corn-based industrial solvents
- Volatile solvent replacements
- Decontamination solvents that replace harsh acids

Green additive technology profiles

- Performance additives for coatings, fuel, and industrial chemical applications
- Additives that reduce VOC emission
- Performance additives for industrial processes

Green synthesis technology profiles

- Environmentally friendly catalysis
- Replacements for synthetic heavy metal catalysts
- Novel synthesis mechanisms that reduce the need for solvents and catalysts

Green manufacturing technology profiles

- Processing aides and equipment
- Carbon sequestration technologies
- Carbon capture technologies
- Efficient chemical manufacturing techniques

BUSINESS OPPORTUNITY EXAMPLES

Polnox Corporation

- Biocatalytically synthesized high performance antioxidants for materials

Pantheon Chemical

- PreKote® surface corrosion pretreatment replacement for hexavalent chromium

Coach House Group

- Novel hydrofluorocarbon solvent plant material extraction

GREEN CHEMISTRY PROCESSING TECHNOLOGIES

Global Business and Licensing Opportunities

ORDER FORM

Expected publication date: _____ 'to be determined'

Pre-publication introductory price \$2,950

Paper PDF

Extra paper copies x _____ \$500 ea.

Total Amount: _____

Shipping/Purchasing Information

Name _____

Title _____

Company _____

Address _____

Telephone _____

Facsimile _____

E-Mail _____

Signature _____

Date _____

Credit Card (MC VISA AMEX)

Card # _____

Expiration date _____ Security Code _____

Enclosed check payable to Technology Catalysts International

TCI invoice requested to address above

Wire transfer (contact TCI directly)

Mail, fax, or telephone your inquires to:

Ajay Rastogi
Technology Catalysts International
605 Park Avenue, Falls Church, VA 22046, USA
Telephone: (703) 531-0257
Facsimile: (703) 237-0042
E-Mail: arastogi@technology-catalysts.com

THE COMPANY

Technology Catalysts International (TCI) was founded in 1979 to provide consulting services that satisfy the technology transfer and business research needs of industry. We specialize in technology transfer, technology assessment, and technology portfolio management. The firm's headquarters are in Falls Church, Virginia, a suburb of Washington, DC. Our global network includes offices in Japan, India, Argentina, the United Kingdom, Germany, and the Czech Republic.

Our research staff is comprised of professionals with backgrounds in a variety of technical disciplines, with additional expertise in international marketing, licensing, finance, and business development. They are skilled in providing clients with strategically important competitive information worldwide. The breadth of our experience ensures clients of high quality, actionable information, and complete coverage of topics of interest.

TCI's core consulting services are based on continued monitoring of technological product development activities on a global basis. The company provides consulting and technology transfer services to leading product developers and manufacturers in North and South America, Europe, and Asia. Our client base consists of small, medium, and large companies.

For more information on our services and capabilities, please visit our website:

www.technology-catalysts.com



WORLDWIDE CONTACTS

World Headquarters

Ajay Rastogi
Vice President
Technology Catalysts International
605 Park Avenue
Falls Church, VA 22046, USA
Telephone: (703) 531-0257
Facsimile: (703) 237-0042
E-Mail: arastogi@technology-catalysts.com
Internet: www.technology-catalysts.com

South America

Carlos A. Massone, M.D.
President
Qualia S.A.
Jeronimo Salguero 2533, Piso 12 A
1425, Buenos Aires, Argentina
Telephone: 54 11 4807 3433
Facsimile: 54 11 4807 2933
E-Mail: carlos.massone@qualia.com.ar
Internet: www.qualia.com.ar

Europe

Graham L. Crawford, MSc
Managing Director
Technology Catalysts International UK
Blacksmiths
Clifton Road
Newton Blossomville
Bedford MK43 8AS, UK
Telephone: 44 (0) 1234 881583
Facsimile: 44 (0) 1234 881027
E-Mail: gcrawford@technology-catalysts.com

Dr. Gerhard Wallenwein
Managing Director
Laves Chemie Consulting
Koenigsteiner Strasse 80
D-65812 Bad Soden, Germany
Telephone: 49 (0) 6196 62057
Facsimile: 49 (0) 6196 27837
E-Mail: laveschemie@t-online.de
Internet: www.laveschemie.de

Ms. Jana Kuhnlova
Executive Managing Director
INVENTIA s.r.o.
Politických veznu 7
110 00 Praha 1, Czech Republic
Telephone: 420 2 224 7484
Facsimile: 420 2 2421 8645
E-Mail: kuhnlova@inventia.cz
Internet: www.inventia.cz

Jiri Krepelka, PhD
General Manager
TCI Generics Europe
Politických veznu 7
110 00 Praha 1, Czech Republic
Telephone: 420 2 2224 7484
Facsimile: 420 2 2421 8645
E-Mail: jkrepelka@technology-catalysts.com

Asia

Sansei Oka
US Business Representative
TCI Japan
4-18-11-101, Takada-Higashi
Kohoku-ku, Yokohama 223-0065, Japan
Telephone: 81 45 543 5578
E-Mail: soka@technology-catalysts.com

Mitsuhsisa Tamura
Senior Research Associate
Sumika Technical Information Service
18 Fl., Tokyo Sumitomo Twin E. Bldg.
27-1, Shinkawa 2-chrome
Chuo-ku, Tokyo 104-003, Japan
Telephone: 81 3 5543 5785
Facsimile: 81 3 5543 5945
E-Mail: tamuram2@sc.sumitomo-chem.co.jp
Internet: www.stis.co.jp

Mr. Jaison Abraham
General Manager
TCI India
Level 4, Dynasty, 'A' Wing
Andheri-Kurla Road
Mumbai 400 069, India
Telephone: 91 22 4030 9499
Facsimile: 91 22 4030 9199
E-Mail: jabraham@technology-catalysts.com

Mr. R.K. Gupta
Managing Director
Industrial Development Services Ltd.
M-1 Kanchenjunga
18 Barakhamba Road
New Delhi 110001, India
Telephone: 91 11 2 331 2287
Telephone: 91 11 2 331 4714
Facsimile: 91 11 2 373 8227
E-Mail: ids@del2.vsnl.net.in
Internet: www.idsindia.org

Visit TCI's website at:
www.technologycatalysts.com

Green Chemistry Processing Technologies

Global Business and Licensing Opportunities

