

Media Release

Clariant Catalysts receives special mention for ICIS Innovation award 2014

- **Special Mention in Best Process Innovation category ICIS Innovation Awards 2014**
- **Breakthrough Heat Generating Material concept - significantly increases selectivity and yield of CATOFIN[®] on-purpose olefin production units**
- **Improved process achieves superior on-stream efficiency and reduced CO₂ emission through energy savings**

Munich, October 17, 2014 – Clariant, a world leader in specialty chemicals, has achieved a special mention in the Best Process Innovation category of the ICIS Innovation Awards 2014 for its Heat Generating Material (HGM) concept, proven to significantly improve the efficiency of CATOFIN[®] on-purpose olefin production units.

The ICIS judges selected HGM for particular recognition because of its step-change contribution to feedstock utilization efficiency through increasing olefin selectivity and yield by several percent. The new concept reduces the carbon emissions of a typical CATOFIN unit by several 10'000t of CO₂ per year. CATOFIN technology based on Clariant's Houdry[®] catalysts creates a reliable and less complex production process for on-purpose olefins production with efficient energy consumption. Licensed through CB&I is the CATOFIN technology currently used in more than 30 propane and butane dehydrogenation plants around the world.

Metal oxide-based HGM is loaded into the catalyst bed of the dehydrogenation plant. It is oxidised and reduced during the process. This reaction produces heat inside the catalyst bed where it drives the dehydrogenation reaction. It significantly reduces the amount of heat that needs to be supplied and also establishes a more favorable catalyst bed temperature profile. This increases olefin selectivity and consequently the yield, while also saving energy and reducing CO₂ emissions.

Several Catofin units utilizing HGM have gone on-stream since 2011, all confirming the advantages of the HGM technology at full commercial scale.

“Shale gas development is creating significant need for on-purpose olefin production, and with HGM we are offering step change improvements to the efficient CATOFIN technology. Several percentage of olefin yield improvement for CATOFIN plants translate into tremendous economic benefit. Further competitive advantages for our customer are brought through sustainability aspects of energy consumption and CO₂ emission reduction,” said Stefan Heuser, Head of BU Catalysts at Clariant.

CORPORATE MEDIA RELATIONS

CARSTEN SEUM

Phone +41 61 469 63 63
carsten.seum@clariant.com

STEFANIE NEHLSSEN

Phone +41 61 469 63 63
stefanie.nehlsen@clariant.com

CATOFIN[®] AND Houdry[®] ARE TRADEMARKS OF CLARIANT REGISTERED IN MANY COUNTRIES.

www.clariant.com

Clariant is a globally leading specialty chemicals company, based in Muttenz near Basel/Switzerland. On December 31, 2013 the company employed a total workforce of 18,099. In the financial year 2013, Clariant recorded sales of CHF 6.076 billion for its continuing businesses. The company reports in four business areas: Care Chemicals, Catalysis & Energy, Natural Resources, and Plastics & Coatings. Clariant's corporate strategy is based on five pillars: increase profitability, reposition portfolio, add value with sustainability, foster innovation and R&D, and intensify growth.

BU Catalysts

The Business Unit Catalysts (BU Catalysts) of Clariant is a global leader in catalysts for industrial processes. It has been part of the Clariant Group since the acquisition of Süd-Chemie in 2011, and is included in the Business Area Catalysts & Energy.

BU Catalysts is headquartered in Munich, Germany and has a total of 18 production sites, 14 sales offices and 9 R&D centers across the world. Approximately 1800 employees serve customers across all regional markets.

The BU offers a broad portfolio of catalysts and adsorbents for many chemical and fuel processes, including those that enable the use of alternative raw materials, such as natural gas, coal, and biomass. In addition, the BU portfolio also includes products that reduce hazardous emissions from industrial processes and combustion engines.