KETTLING, ULRICH* and IRINA N. STERR, Süd-Chemie AG, Corporate Research & Development Department, Staffelseestr. 6, 81477 Munich, Bavaria, Germany. **Liquefied sugar beet - the ideal fermentation substrate for your bio-based products**

The production of bio-based fuels and chemicals requires renewable feedstocks at affordable costs. Sugar beet (*Beta vulgaris*) is among the agricultural crops with the highest sugar yields. Süd-Chemie developed a proprietary and innovative technology for the enzymatic liquefaction of whole sugar beets without using a diffusion method or adding any water. A key figure is Süd-Chemie's own optimized set of enzymes for the liquefaction of beets. Süd-Chemie's Liquefied Sugar Beet (LSB) process can enhance the content of fermentable sugar resulting from sugar beets, as the *LSB* fermentation substrate contains everything from the sugar beet root, including sugars from the cellulosic and hemicellulosic part of the plant as well as proteins and minerals. This makes *LSB* an ideal and complete ready-to-use fermentation substrate. Within the process no sugar beet pulp remains, which is mostly dried for usage as animal feed in a very inefficient way. With the *LSB* process, Süd-Chemie now offers a highly cost-efficient fermentation substrate derived from sugar beet for a variety of bioprocesses, including production of ethanol, lactic acid or succinic acid. With sales of €1.1 billion, Süd-Chemie AG is a world-wide leader in catalyst and adsorber technology and has an outstanding track-record in chemical and agro-chemical innovations for more than 153 years. With more than thirteen research centres and more than 6,400 employees world-wide, the company is one of the most distinguished companies for innovation in the chemical industry. Süd-Chemie AG actively develops sustainable solutions for the post-petroleum area. One of the solutions is the development of technologies for processing cellulosic biomass into fuels and chemicals.