Polyethylene: innovations driven by market requirements

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Despite being one of the oldest synthetically produced polymers, the performance of linear polyethylene is still improving through advances in the production process and catalysis as well as deepened understanding of structure-property relations. Also in the area of Ziegler-Natta catalysts, further improvements and optimizations are continuing, despite their elusive nature.

Although initially the developments were often *technology pushed* through broadening the scope of the catalysts and subsequently identifying possible product applications, nowadays developments are largely driven by customer demands, which requires translating a desired polymer performance back to the required catalyst performance and process conditions through the well know multidisciplinary chain-of-knowledge approach.

In this lecture, SABIC's approach for catalyst aided product design will be illustrated using some recent results in the area of Ziegler-Natta based polyethylene.