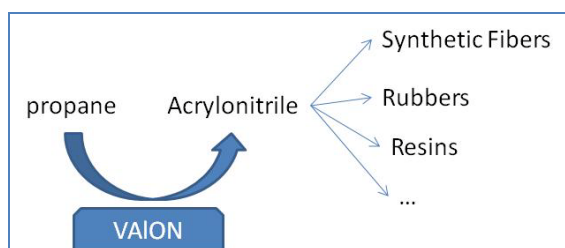


VAION – A new catalyst family for propane ammoxidation

Sopartec, the technology transfer company of the Université catholique de Louvain (UCL), presents a new catalyst for propane ammoxidation.



Technology Keyword

- Propane ammoxidation
- Catalyst
- Acrylonitrile
- SOHIO process

Technology Market - Petrochemicals

Acrylonitrile is widely used as a chemical intermediate in the production of **synthetic fibers, rubbers, nitriles, resins** and **other commodities**.

Actually, acrylonitrile is mainly produced by **propylene ammoxidation**. Propylene accounts for roughly 60 percent of the cash cost for making acrylonitrile in current plants. Therefore, an alternative to this industrial application is to replace the propylene by **propane**. The propane process **reduces the direct cost** of manufacturing acrylonitrile by at least **20 percent** while **reducing wastes**.

The UCL invention

Due to lower propane's reactivity propane ammoxidation requires harsh conditions and very active and stable catalysts.

Amongst these, vanadium-aluminium-oxynitride "**VAION**" has been discovered and patented by the laboratory of catalysis at UCL (www.cata.ucl.ac.be/engcata.html) has a new catalyst family to perform propane ammoxidation (1)

This new catalytic material exhibits amorphous character, high specific surface area, basic-redox properties and **higher acrylonitrile production per hour and amount of catalyst compared to existing catalysts**. (2)

Technology Status

Available for licensing

Representative References

1. R. Prada Silvy, N. Popescu, N. Blangenois and P. Grange. *Propane ammoxidation catalysts based on vanadium-aluminium oxynitride* AIChE Journal, 49, 2228-2231, **2003**
2. M. Olea, M. Florea, I. Sack, R. Prada Silvy, E.M. Gaigneaux, G.B. Marin and P. Grange. *Evidence for the participation of lattice nitrogen from vanadium aluminium oxynitrides in propane ammoxidation*. *Journal of Catalysis*, 232, 152-160, **2005**.

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