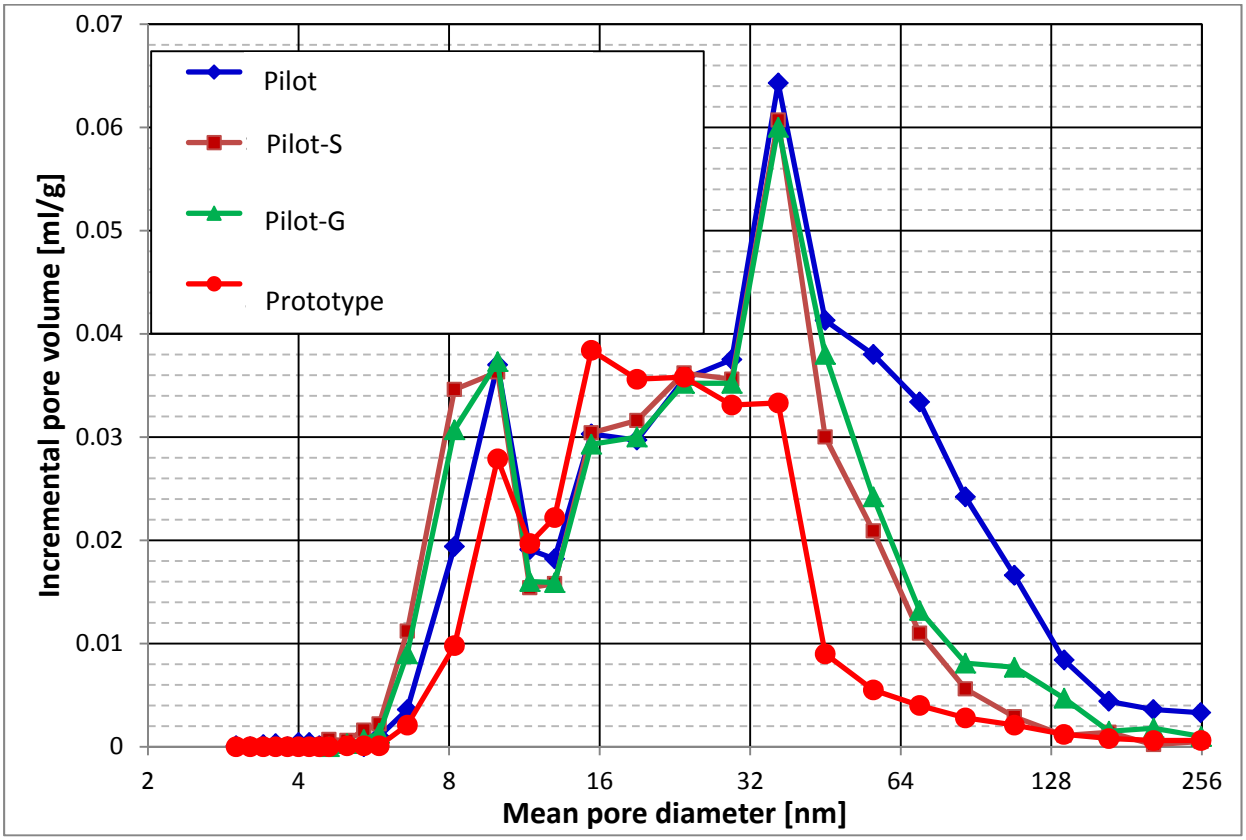
SUPPORT DATA FOR MANUSCRIPT:

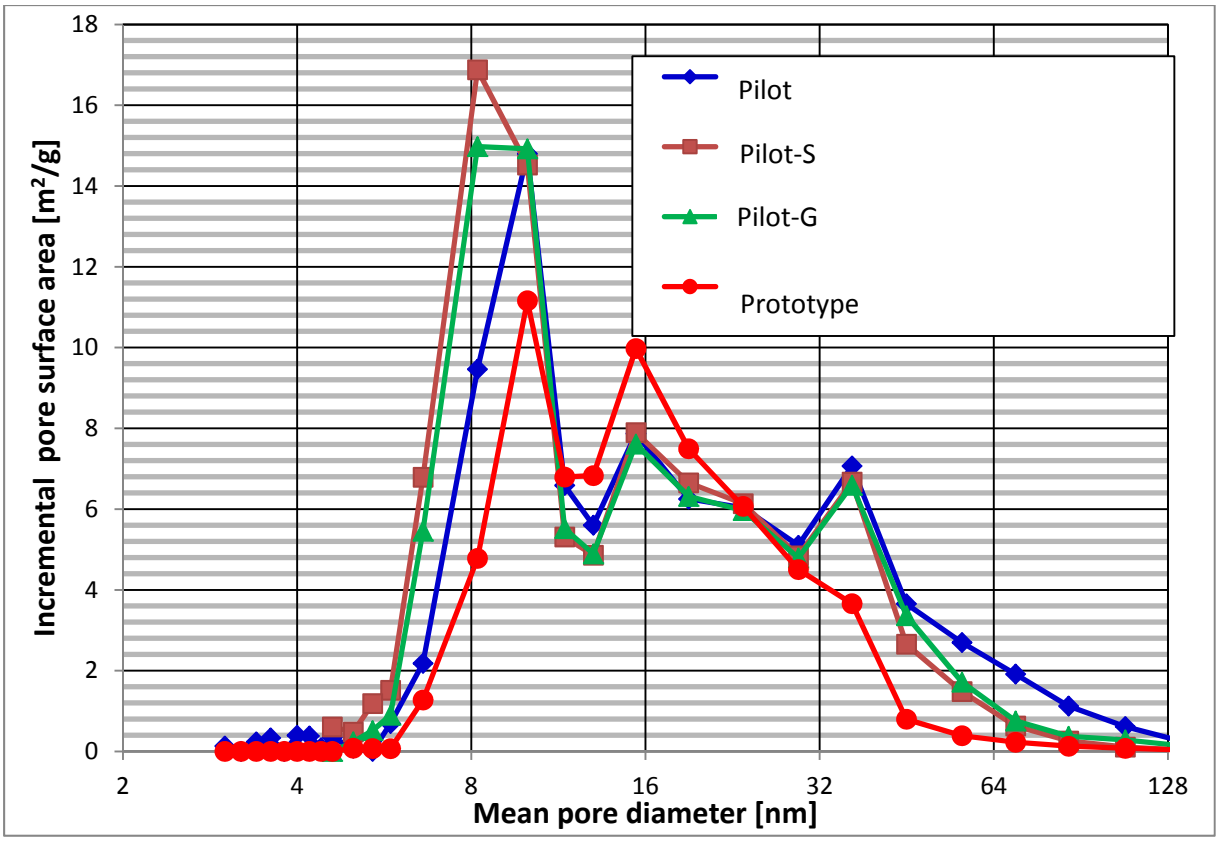
„From laboratory catalysts to a new prototype: A novel real candidate for the isomerization of C5-C6 paraffins.“

EXPERIMENTAL:

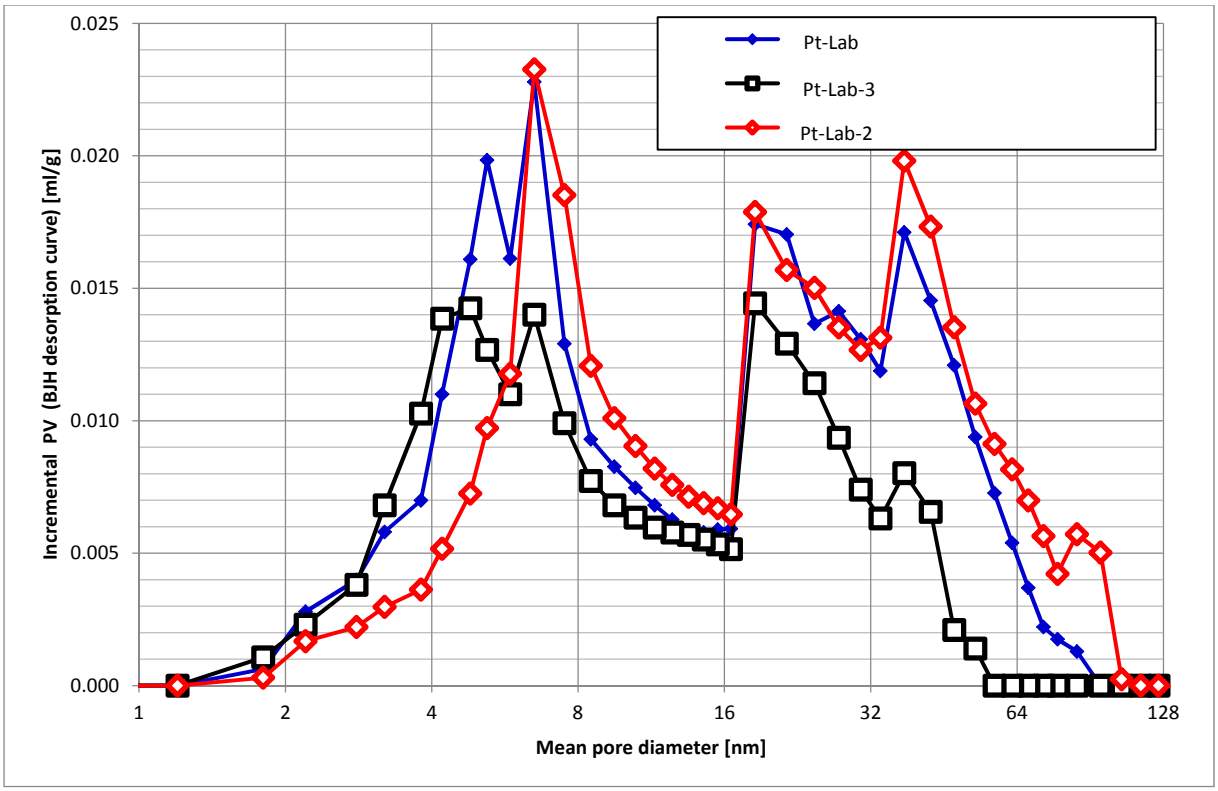
Mercury Porosimetry of Pilot and Lab catalysts



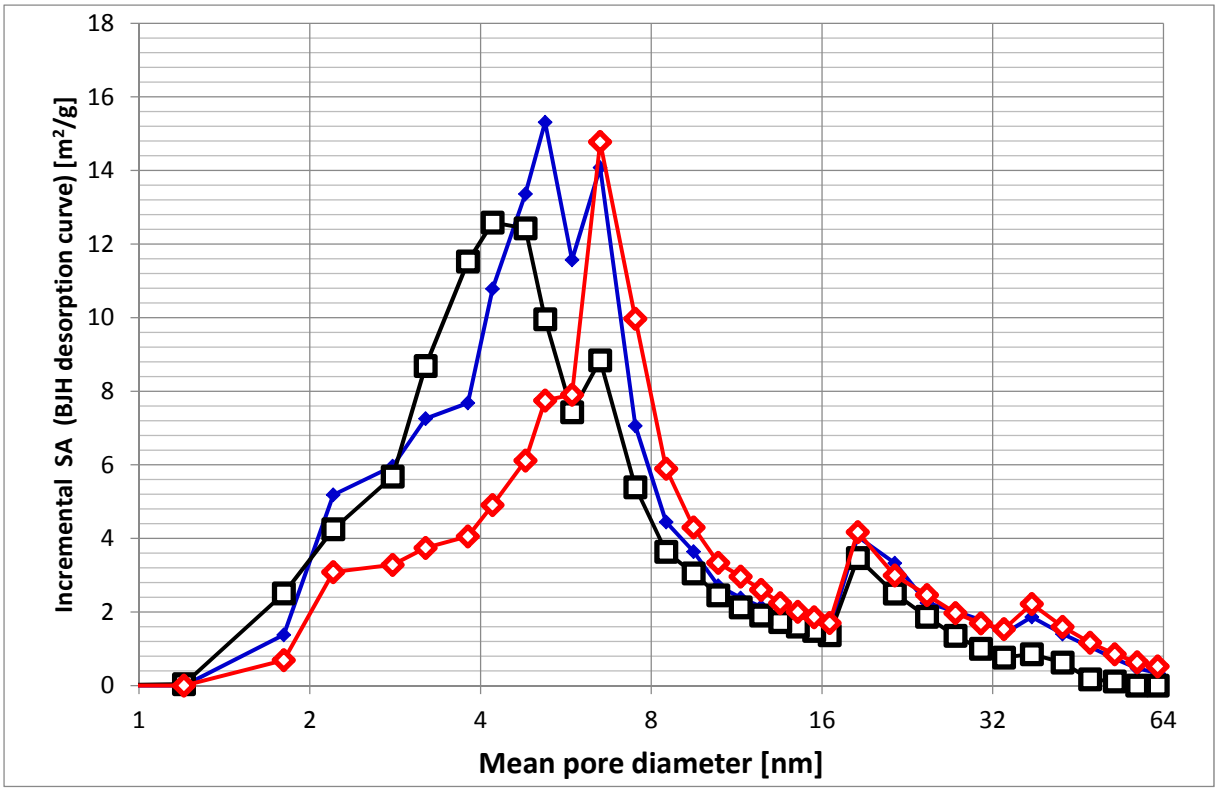
Mercury porosimetry intrusion. A pore distribution expressed by volume.



Mercury porosimetry intrusion. A pore distribution expressed on the surface area (cylindrical model)



Mercury porosimetry intrusion. A pore distribution expressed by volume.



Mercury porosimetry intrusion. A pore distribution expressed on the surface area (cylindrical model)

Test conditions:

Catalysts were activated. At beginning the catalyst was heated from room temperature to 748 K (5 K min^{-1}) (air flow 30 NL h^{-1}), followed by time lag 3 hours at 748 K. Then, the reactor was cooled to 523 K using nitrogen flow (50 NL.h^{-1}). Finally, the catalyst was reduced in H_2 stream at 523 K for 2 hours. Catalytic tests were carried out at 523 K and pressure 15 bar (H_2), using 30 g of n-alkane per hour fed by a HPLC pump (feedstock), with 30.4 NL h^{-1} of H_2 (*text also written in the manuscript*).

Test:

A huge number of tests were carried out. Some selected tests are exposed below:

Catalyst "Pilot".

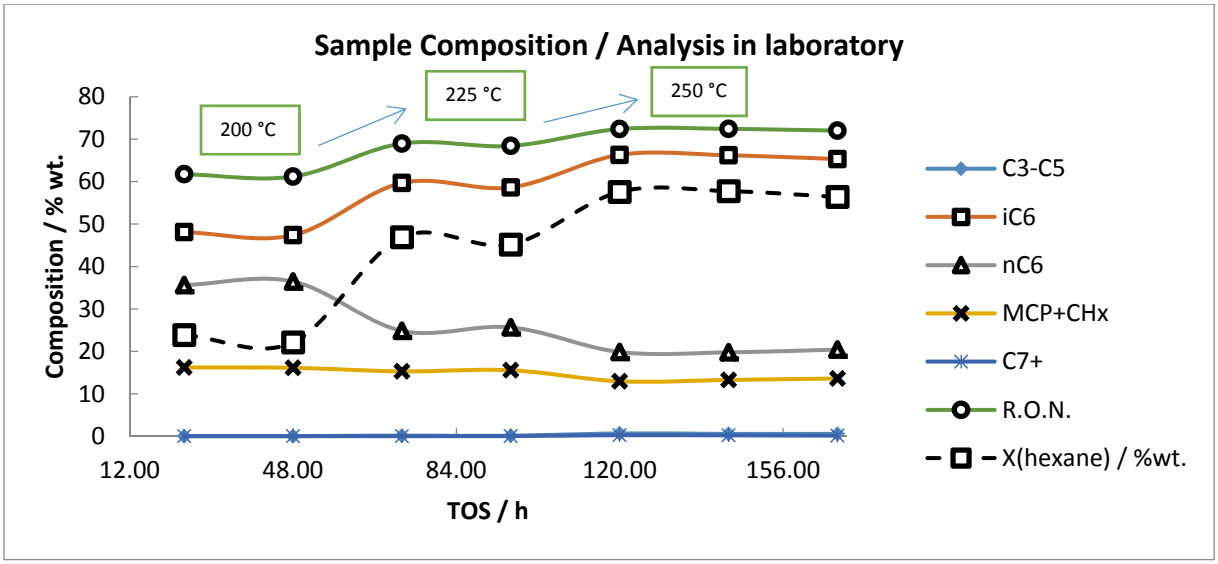


Figure. Products composition and R.O.N. at 200, 225 and 250 °C. Hexane pure and catalyst "Pilot" were used.

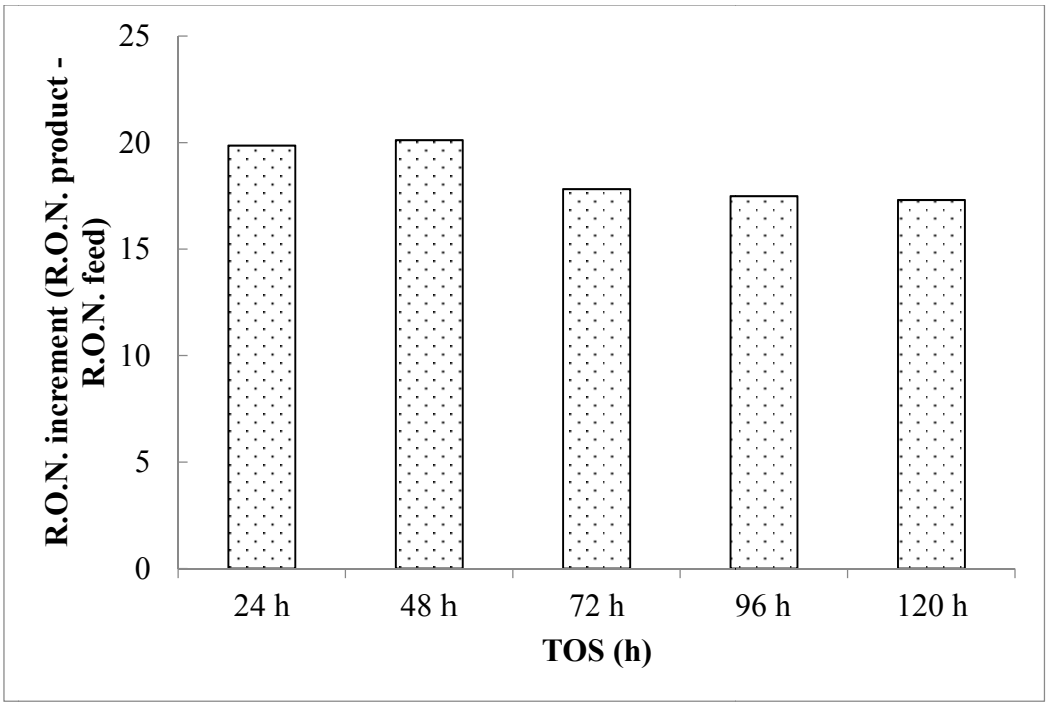


Fig. Increment of the R.O.N. taking as reference the R.O.N. of the feedstock. The feed was the hexane pure. The catalyst was the Prototype.

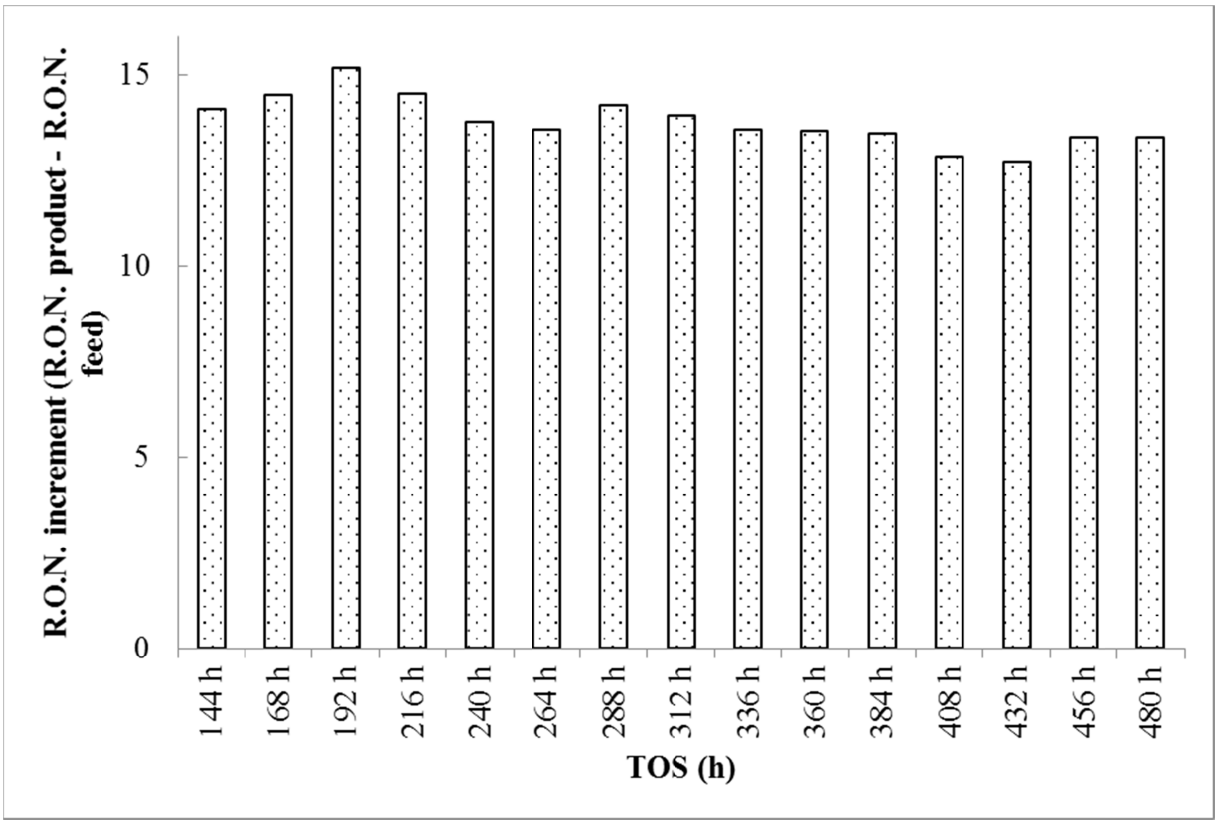
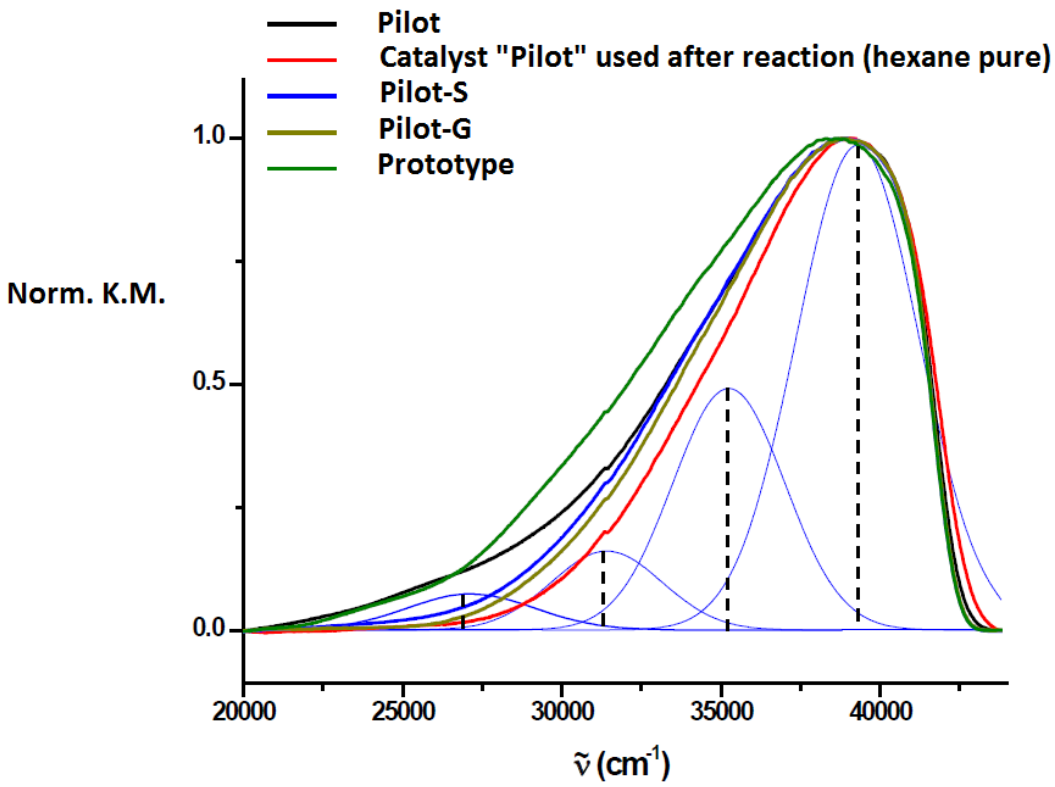


Fig. Activity of the Prototype using a C5-C6 feed.

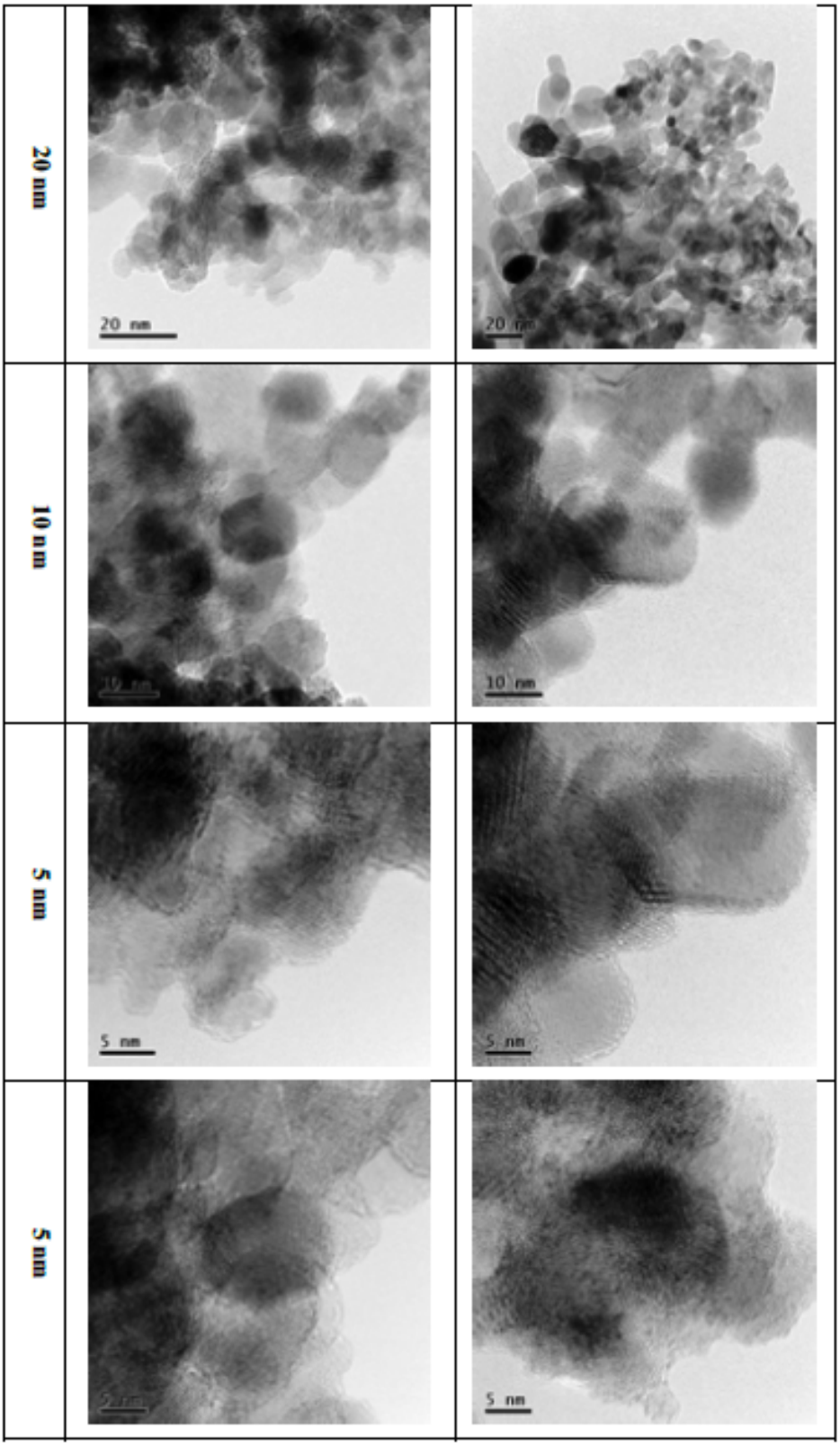
UV-Vis data:

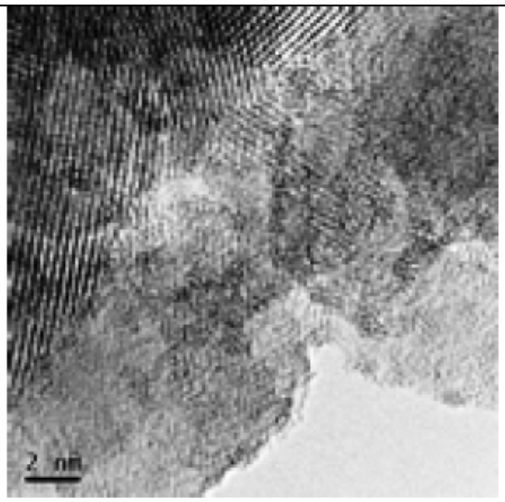
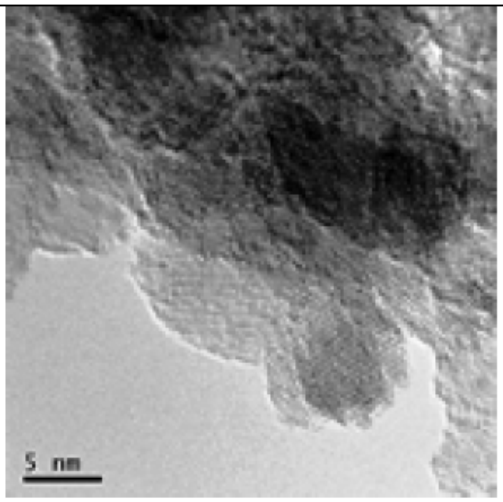
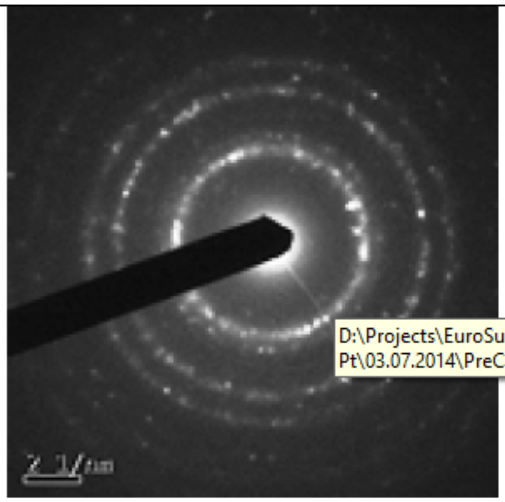
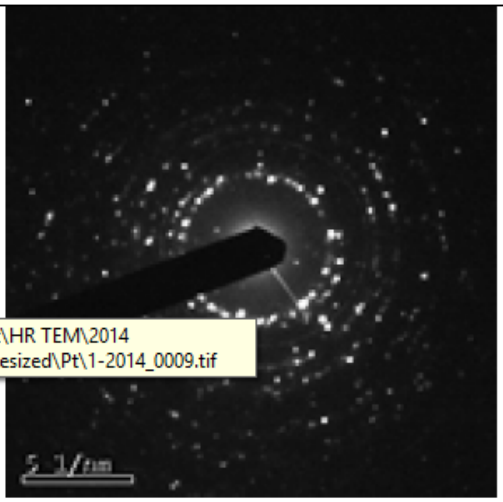


UV-Vis spectra.

HR-TEM of Pt-Lab catalyst

Catalyst Pt-Lab



2 nm		
Difraktogram 1		
Difraktogram 2