



Catalysing excellence

Catalysing success

Catalysing innovation

The science and technology of air purification

From **ideas** to solutions



Goldemar Solutions is focused on developing advanced materials for **emission control** and other **cleantech** applications through a combination of scientific skills in the fields of chemistry, nanotechnology, catalysis and chemical engineering.



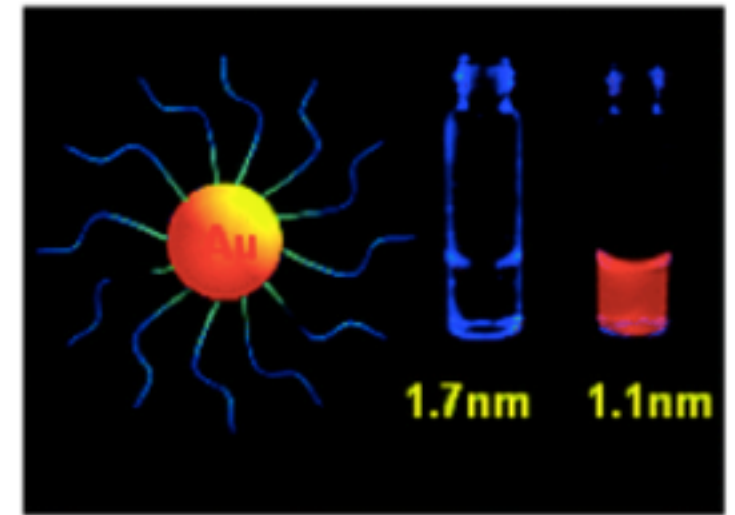
The dimensionality of **Gold**



Inert bulk gold
($d > 100$ nm)

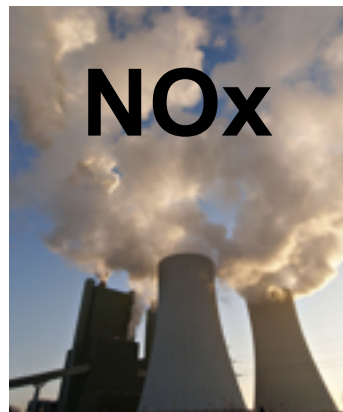
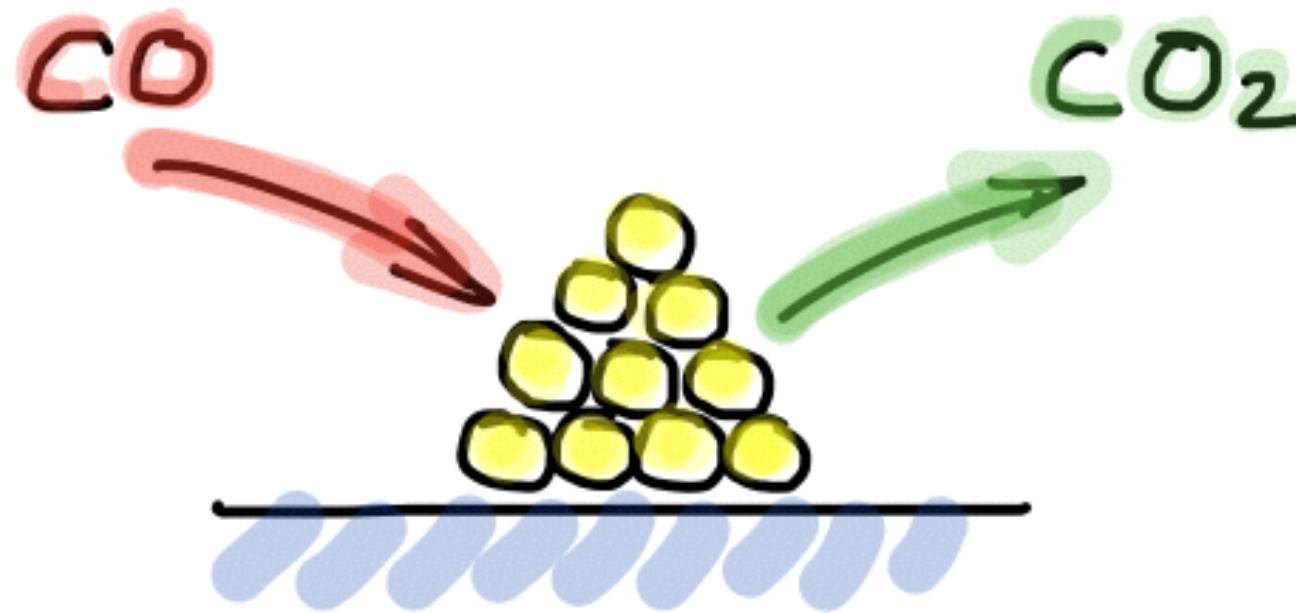


Metallic nanoparticles (NPs)
($d > 15$ nm)



Fluorescent gold clusters
($d < 2$ nm)

Nanotechnology for **cleaner air**



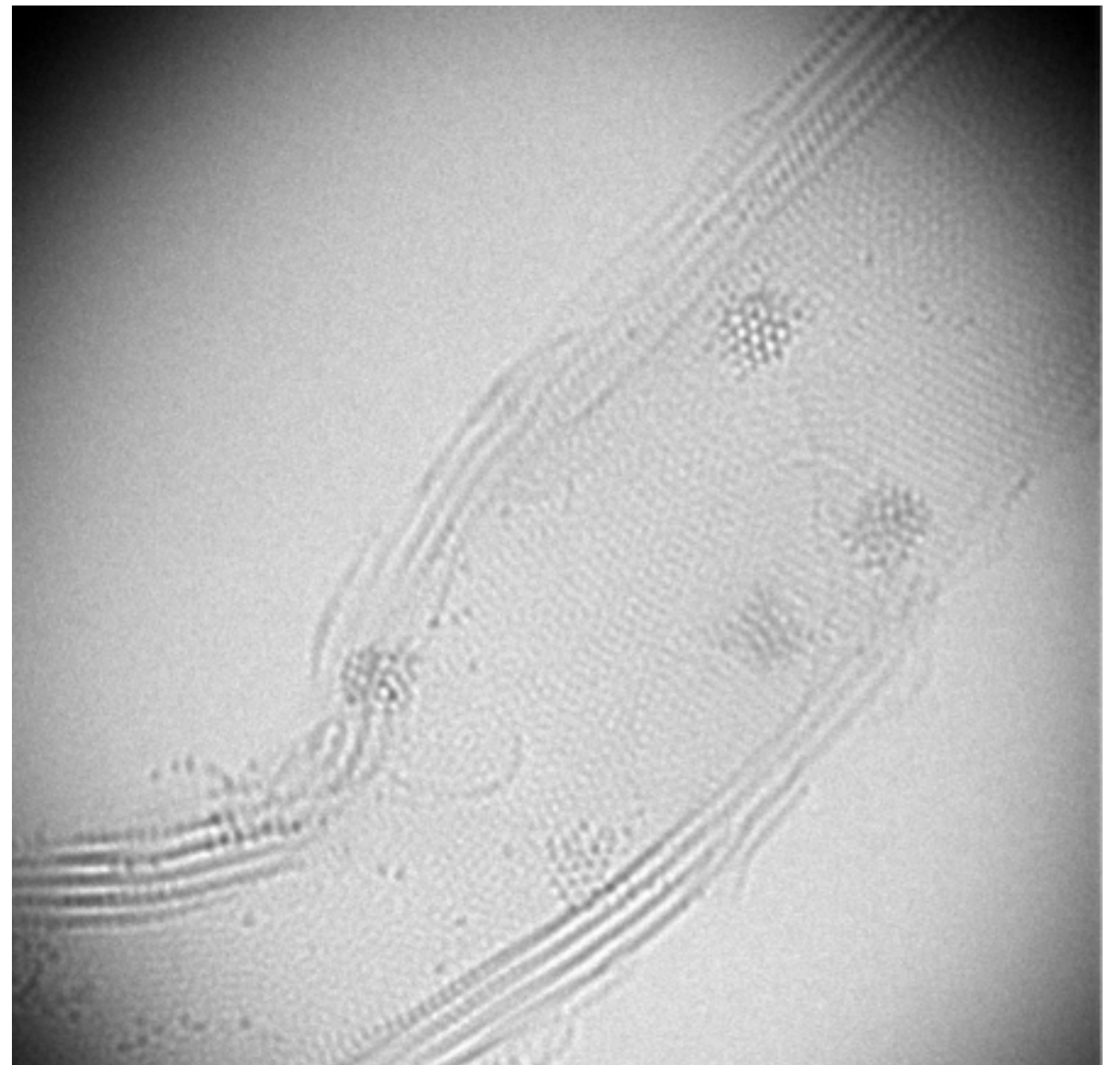
room temperature oxidation

low temperature combustion

Nothing is needed to **purify the air**, but air itself!

The **Goldemar** technology

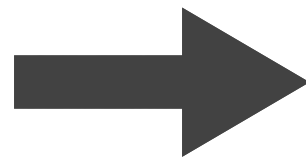
Our discovery allows for the assembly of a specific configuration of gold clusters using very few atoms of gold, with an approximate particle size of 1nm. These configurations allow for an extraordinary and **unique catalytic performance for oxidising contaminant molecules at ambient conditions**



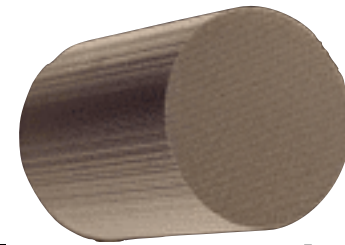
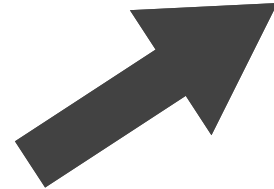
roadmap product



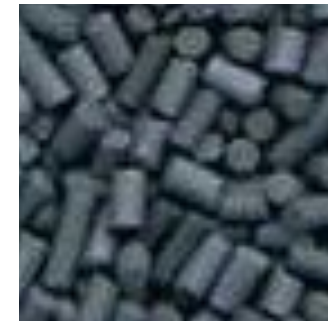
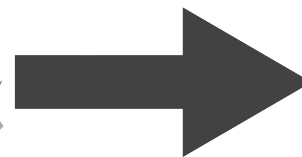
**Intellectual
Property**



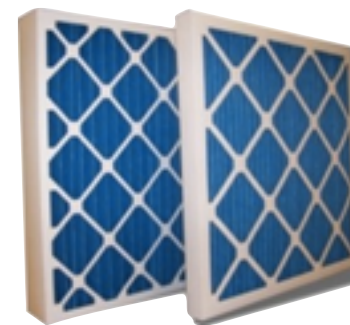
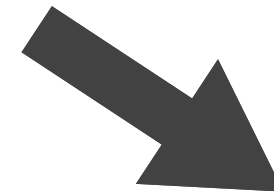
First Product



**Impregnated
Monoliths**



Pellets



**Impregnated
Filters / Fabrics**



**Licensing
Agreements**



Product portfolio

Goldemar has developed a range of products that offer the best solutions to eliminating pollutants in different environments.

- **ALBERICH:** A state of the art catalyst capable of removing VOCs and other contaminants at room temperature.
- **ELBEGAST:** A disruptive catalyst capable of removing CO, VOCs, HC, SOOT and NO_x at room temperature.
- **PEREGHART:** A catalyst capable of removing ethylene and thus increasing fruit and legumes storage life.
- **OTHER PRODUCTS:** We are able to develop tailor-made products for specific applications to meet our customers' demands.

B2B business model



We **co-develop** solutions with our customers

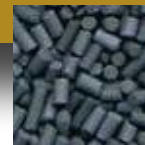
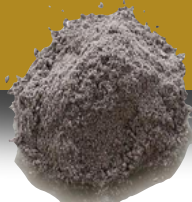
Currently co-developing with 10 multinational corporations,
including 2 Fortune 50

We are open to provide:

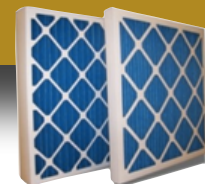
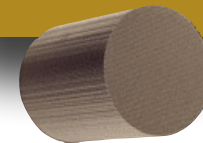
Licensing



Powder & Pellets



Finished products:
monoliths & textiles



We do not sell nanoparticles... we sell tailor-made solutions

key strategic **verticals**



Respiratory Devices



Commercial Printing Emissions



Fruits and Flowers



Air Purification Systems



Vehicle Emissions Regulation



Submarine

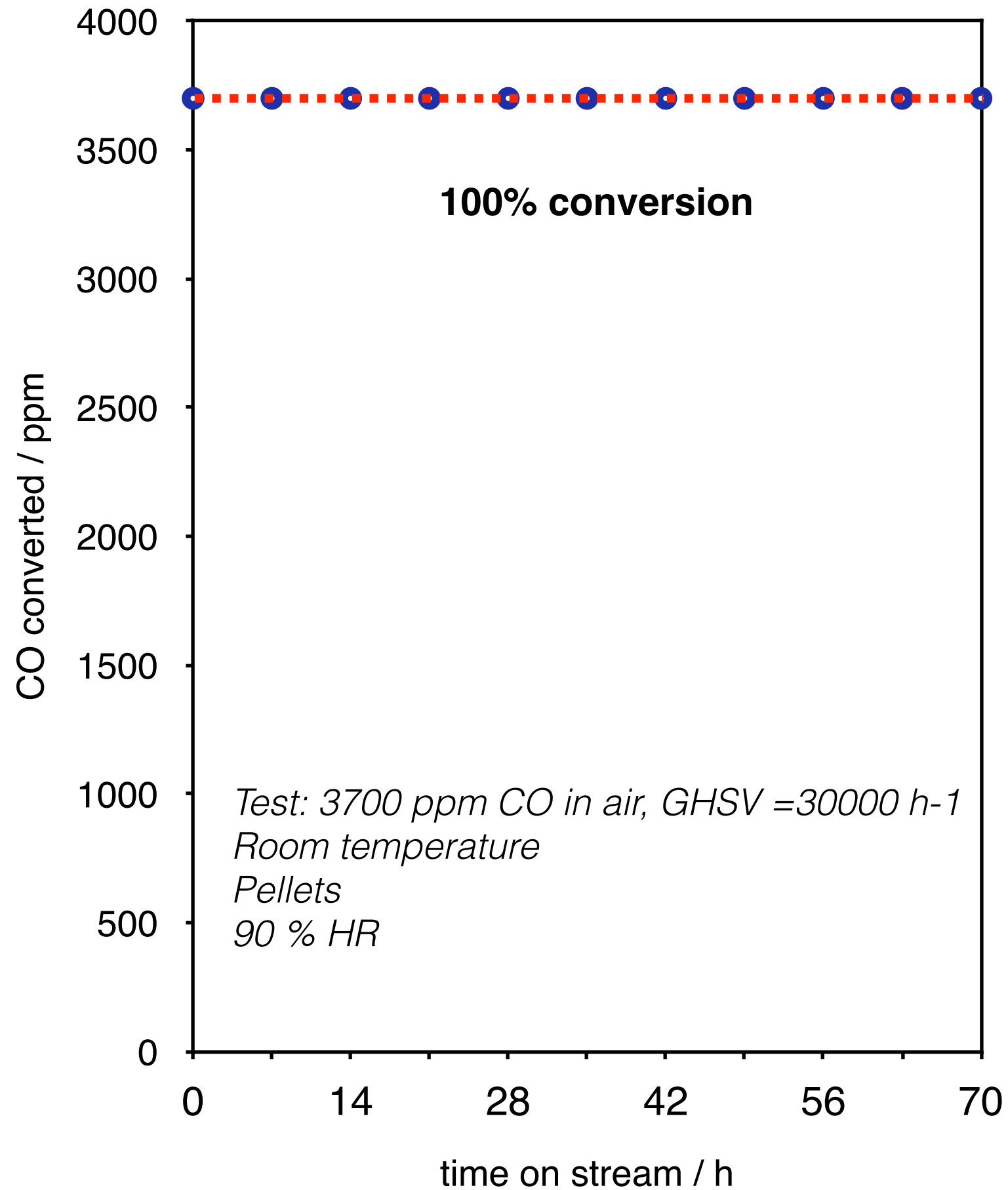




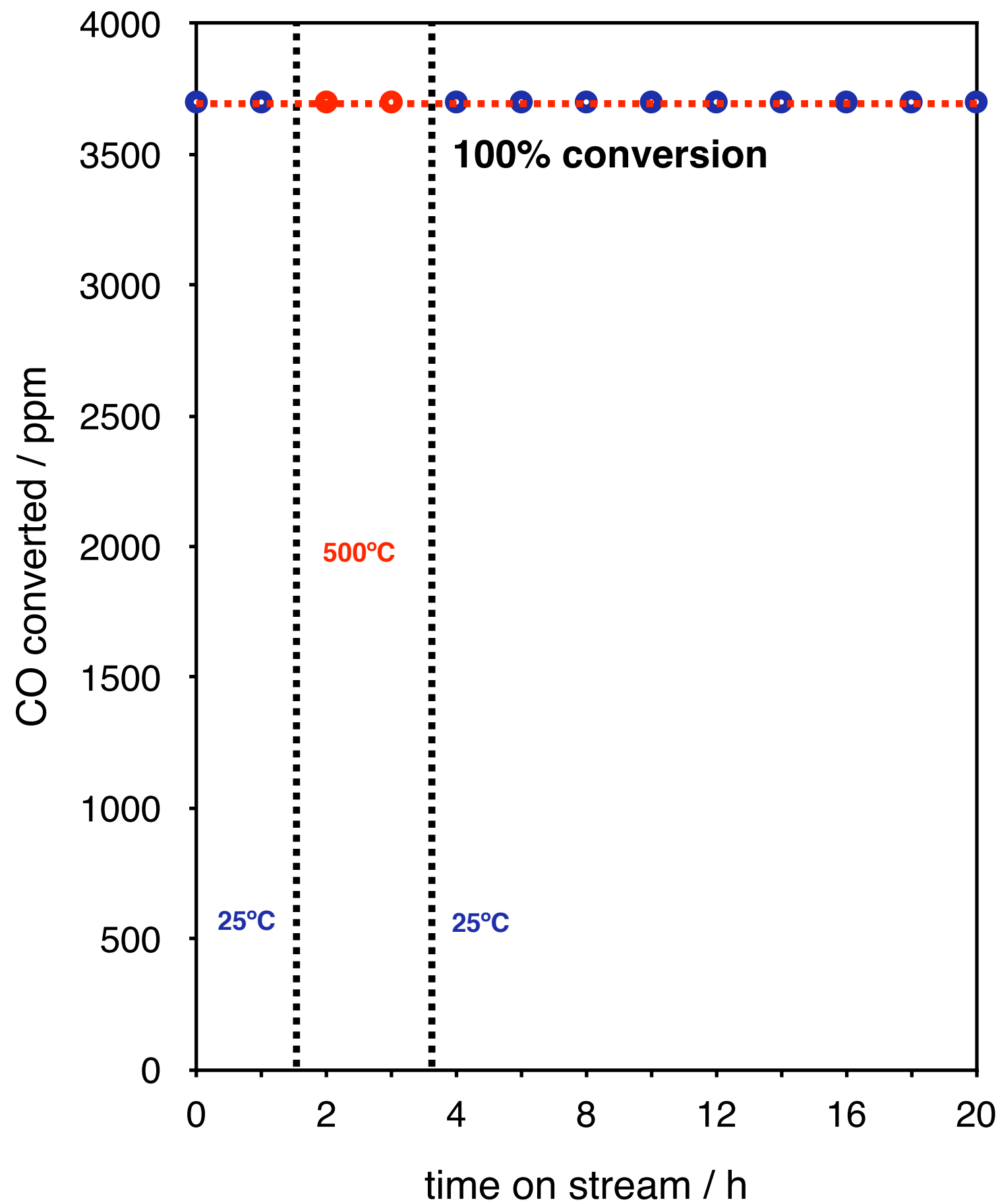
TEST RESULTS

CO

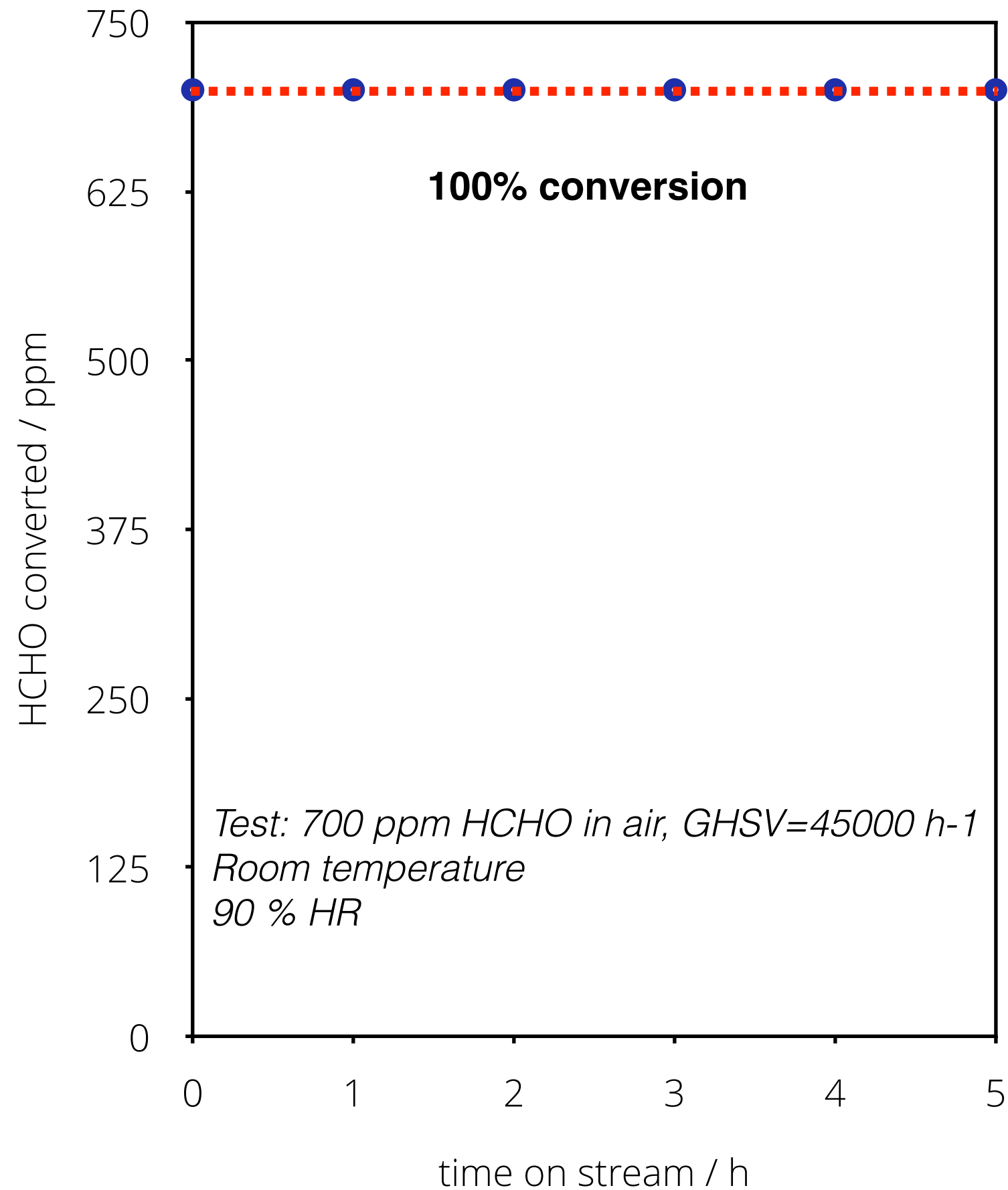
removal



thermal stability



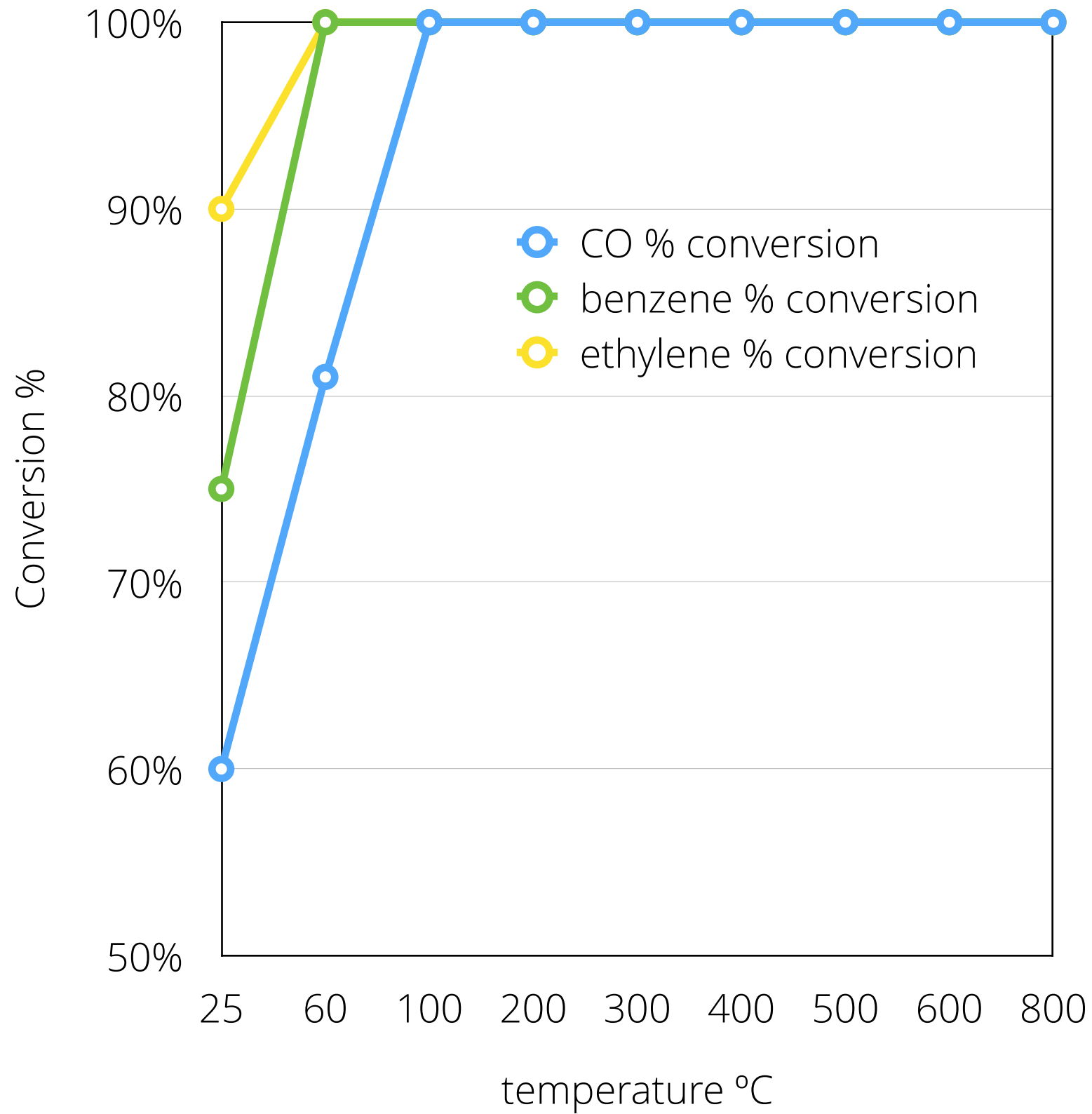
Formaldehyde elimination



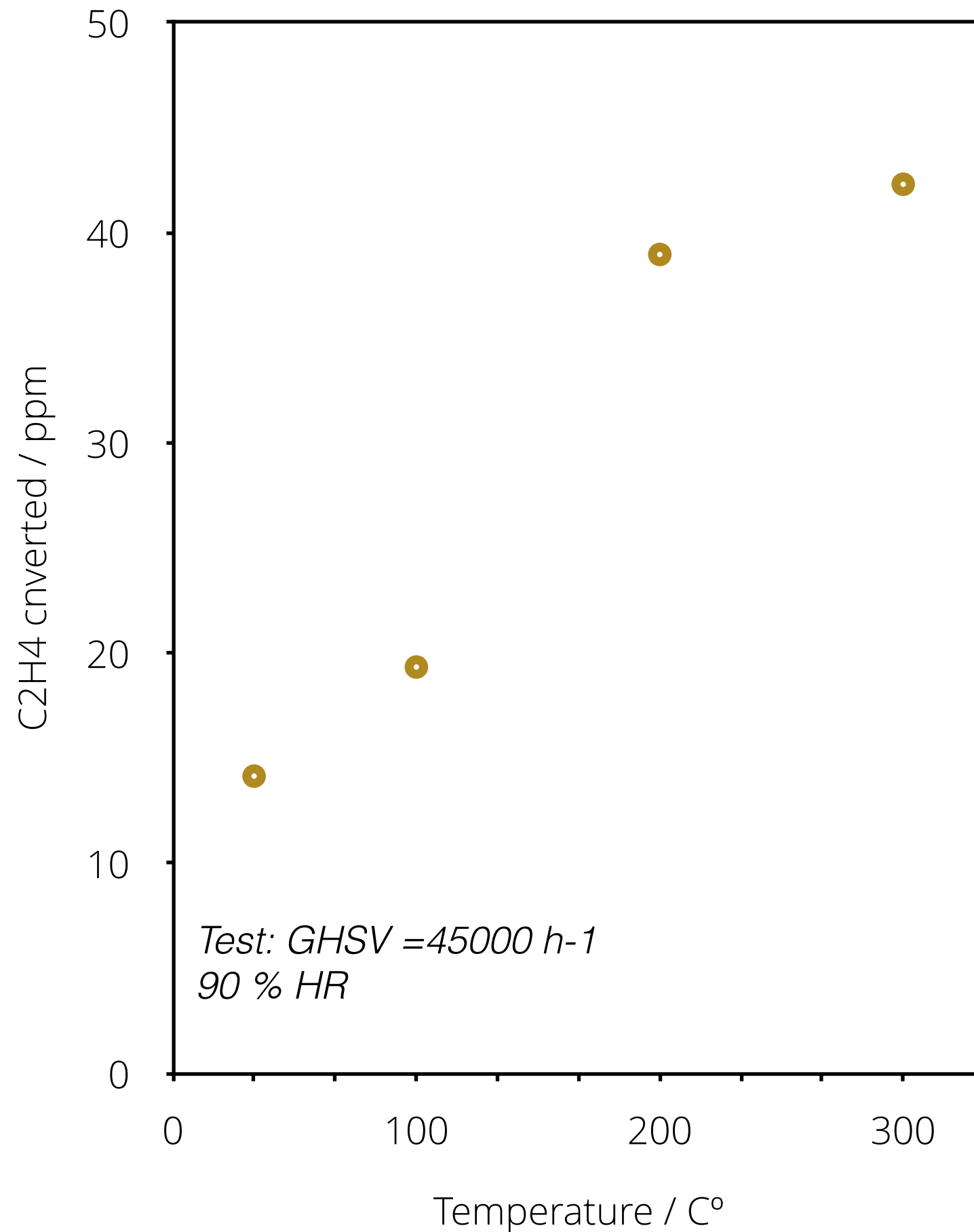
Gas mixtures

70% NO_x Conversion
No N₂O formation
No aging at high temperature

Feed composition (wt.%)	
Oxidative conditions	
Element	Concentration
CO	130 ppm
HC's	40 ppm
NO _x	100 ppm
RH %	3.66%
O ₂	12.7%
N ₂	83.64%



Ethylene elimination



VOC

elimination



Methanol	Ethanol
Isopropanol	Toluene
Benzene	Acetone
Ethylene	Many MORE...

Goldemar's business model



Let us know your **application** and **requirements**
We will find the best **solution** for your application



Dr Ernest Mendoza
General Manager and Founder
ernest.mendoza@goldemar.com



Dr Ernest Mendoza
General Manager and Founder
ernest.mendoza@goldemar.com

*The only catalyst **in the world** capable of removing
contaminants at ambient temperatures in the
presence of humidity*