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Upscaling sol-gel technology to make it a competitive way for coating manufacture and process at an industrial scale

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The NCE laboratory in ULiège is active in the development of nanostructured materials for various applications such as catalysis, electrochemistry and functionalized coatings. The specificity of NCE's research lies in their transversality, through which materials science and chemical engineering are approached in an integrated way.

The goal of this presentation is to describe the underlying general concepts that led over the years to nanostructured materials used in fields as different as dechlorination processes, water and air purification, microbatteries components, photoactive powders and coatings.

The possibilities of scaling-up for the processes developed to produce the different materials are particularly emphasized.