

Design, implementation and production upscaling of

novel, high-performance, cluster-based catalysts for

CO2 hydrogenation

**Deliverable D.xx**

**First report on xxxxxxxxxxxxxxxxx**



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**Contents**

**Deliverable D.1.1 First report on successful deposition of metallic clusters for ECs**

# Goal.

The goal is to provide the first demonstration of the successful deposition of mono and bi-metallic clusters on flat substrates and TEM grids

# Approach.

We have used the dual laser dual target ablation source to deposit AgAu bimetallic clusters of 2 nm diameter and the new sputtering source to deposit pure mass-selected Ag clusters of different size (Ag7, Ag20 and Ag100) on flat Si wafer surface and on TEM grids. AFM images of clusters on Si wafer and HAAFD-STEM images of clusters on TEM grids are provided as clear evidence of the deposition..

# Results.

**[xx]**

# Experimental details.

**[xx]**

# Conclusions.

**[xx]**