ESRF	**Experiment title:** XAFS investigations on Al2O3 supported AuAg bimetallic catalysts.	**Experiment number**: 08-01-1032
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Names and affiliations of applicants (* indicates experimentalists):

Balerna Antonella* - INFN LNF, Frascati,, Italy

Evangelisti Claudio* - CNR ISTM, Milano, Italy

Tiozzo Cristina - CNR ISTM, Milano, Italy

Prati Laura – Univ. degli Studi di Milano, Milano, Italy

Villa Alberto* - Univ. degli Studi di Milano, Milano, Italy

Andrea Jouve* - Univ. degli Studi di Milano, Milano, Italy

Report:

XAFS measuremenst were performed at the Au L_3 -edge and Ag K-edge and 12 monometallic and bimetallic samples were characterized. The proposal was focused on the investigation of the effects of the preparation methods on the final structure of Au-Ag bimetallic systems dispersed and supported on Al_2O_3.

Au-Ag nanoparticles were prepared using two different synthetic approaches: a) co-reduction of metal precursors and b) simultaneous evaporation of the two metals by solvated metal atoms dispersion (SMAD) technique.

In oxidation reactions, Ag-Au nano-catalysts have been reported to show synergism and high activity but the effect of their structural features on the catalytic efficiency is not still completely understood due to the lack of deep investigation.

EXAFS data analysis revealed relevant structural differences between samples prepared using two different colloidal and solvated metal atoms dispersions (Fig.1).

A paper on the structural differences observed by XAFS and TEM analysis in relation with the observed catalytic properties is under preparation.

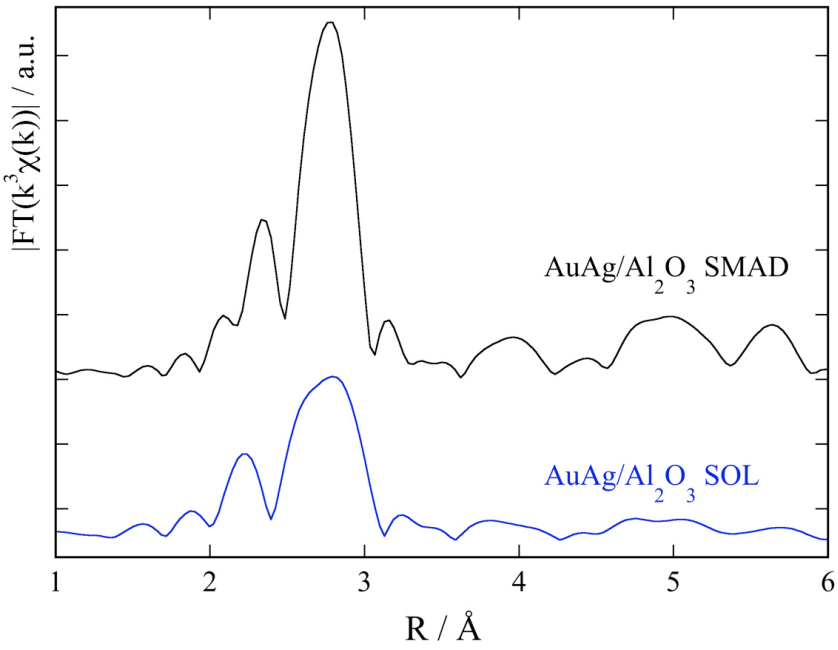

Fig. 1 – Comparison between the Fourier Transforms (FT) of two bimetallic AuAg samples obtained using solvated metal atoms dispersion (SMAD) and colloidal dispersion (SOL).