	In-situ QXAFS for the reactivity of bimetallic PtPd supported catalysts towards H_2S : support effect and thioresistance.	30-02-9
Beamline: BM30B	**Date of experiment**: from: 04 /12/02 to: 10/12/02	**Date of report**: 16/12/02
Shifts:	Local contact(s)**: Y. Soldo**	*Received at ESRF:*

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Report: The objective of the study was to get structural and kinetic information on Pd-S and Pt-S bonds formed under in-situ conditions upon sulfidation and the reactivity of these bonds during reduction, or catalytic reaction of 1-butene in the presence of H_2/H_2S mixture. Attempt to use QEXAFS for time resolved studies could not be performed du to technical problems. Conventional EXAFS In-situ experiment were performed in fluorescence mode at Pt L_{III}-edge and Pd K-edge. The nature of the specimens i.e. supported nanoparticles of Pt and PtPd allowed to detect the chemical interactions the surface of the particles. The Figure 1 illustrates the transformations of a Pt/Al_2O_3 (1.22 wt% loading) catalysts under various treatments (Pt L edge) and Figure 2 the transformation of Pd neibhouring (Pd K edge)in $PtPd/Al_2O_3$ (0.12 wt%Pd) .

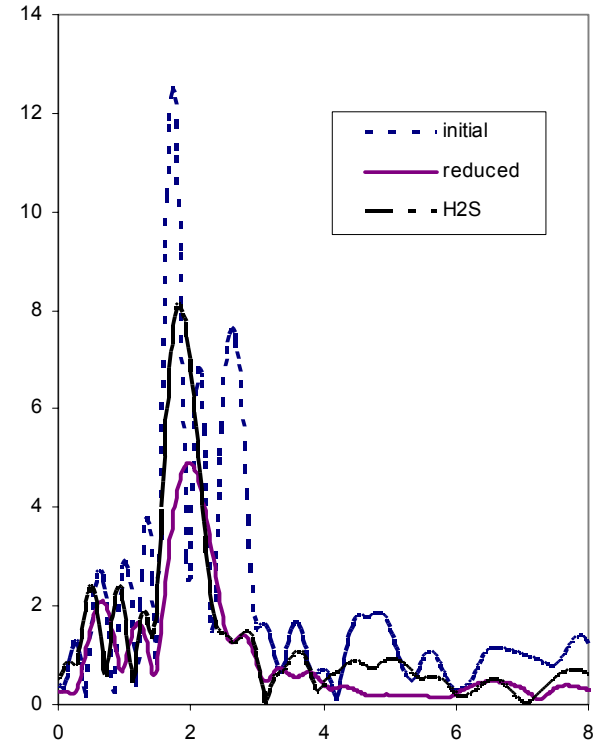

Figure 1 : Fourier transform at Pt L_{III}edge of Pt/Al_2O_3 sample after various treatments.

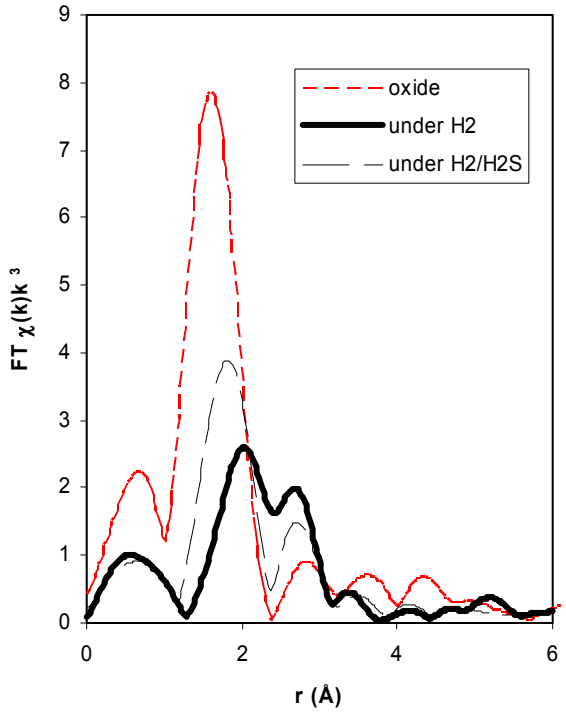

Figure 2 : Fourier transform at Pd K-edge of oxide sample and in-situ reduced and then sulfided sample.