Abstract Submitted
for the MAR05 Meeting of
The American Physical Society

Interaction of oxygen with oxide-supported gold films SU YING QUEK, Harvard University, JOYDEEP BHATTACHARJEE, UMESH WAGHMARE, Jawaharlal Nehru Centre for Advanced Scientific Research, EFTHIMIOS KAXIRAS, Harvard University — Whilst bulk gold is known to be inert, oxide-supported gold nanoparticles have been found to be highly effective in the catalysis of low temperature oxidation of carbon monoxide. This remarkable activity has been attributed to effects of charge transfer to and from the gold nanoparticles, quantum size effects, reduced co-ordination of gold atoms, as well as interface effects. However, the relative importance of such effects is still controversial. In this work, we seek to distinguish these effects and understand their relative importance, using model systems involving oxide-supported gold films.

Su Ying Quek
Harvard University

Date submitted: 02 Dec 2004 Electronic form version 1.4