Abstract Submitted
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Activity and Selectivity of Size-Selected Sub-nm to Nanometer Size Silver Clusters in the Selective Oxidation of Propylene[1] STEFAN VAJDA, SUNGSIK LEE, Argonne National Laboratory, KRISTIAN SELL, Universitaet Rostock, YU LEI, University of Illinois at Chicago, INGO BARKE, ARMIN KLEIBERT, Universitaet Rostock, ARANTXA FRAILE-RODRIGUEZ, Swiss Light Source, VIOLA VON OEYNHAUSEN, KARL-HEINZ MEIWES-BROER, Universitaet Rostock, RANDALL MEYER, University of Illinois at Chicago, BYEONGDU LEE, SOENKE SEIFERT, RANDALL WINANS, JEFFREY ELAM, MICHAEL PELLIN, Argonne National Laboratory, SUZANNE GIORGIO, CLAUDE HENRY, CINaM CNRS Marseille, DETRE TESCHNER, ROBERT SCHLOEGL, Fritz-Haber Institut — The activity and selectivity of Ag nanoparticles in propene oxidation will be discussed and compared with the performance of Ag3 clusters. The experimental studies are based on 1) chemically uniform support fabrication, 2) size-selected cluster deposition, 3) electron microscopy of nanoclusters, and 4) in situ synchrotron X-ray characterization of clusters under working conditions, combined with mass spectroscopy analysis of reaction products.

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