Advanced Photon Source Activity Report for 2003

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Summary of experiments conducted at *HPCAT*

During 2003 we visited HPCAT twice for a total of 2 shifts. With the data we have submitted one paper that is under review.

Nano Au Project

This project was conducted to determine the effect of grain size on the yield strength of gold. This is the first analysis of this kind allowing the evaluation of the peak width of the diffraction peaks as an indicator for the grain size distribution of the sample in the DAC. The experiments resulted in a paper that has been submitted to Applied Physics Letters and is still under review.

Singh, A. K, Liermann H. P., Saxena S. K., Mao H-K (2004). Strength of nanocrystalline gold under pressure. Submitted to Applied Physics Letters.

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