

**Materials Science Applications of Heavy Ion Beams from the Gustaf Werner Cyclotron,**  
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J. THOMAS, Institute of Chemistry, Uppsala University, Sweden - Heavy ion beams, most often xenon at 8.3 A MeV, from the Gustaf Werner cyclotron at The Svedberg Laboratory are used to create ion tracks in various materials such as quartz, polymers, mica and glass. For some applications these ion tracks are etched in order to create micro structures like tuning forks or materials with well defined pore geometries. In other applications the deposited energy is used for disordering the structure in order to modify superconducting films or to create ultra-hard materials. We describe the experimental setup with its control system and discuss the various experiments.