

Abstract Submitted
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Overview of results from the Lithium Tokamak eXperiment (LTX)¹ R. MAJESKI, R. BELL, D. BOYLE, E. GRANSTEDT, J. HARE, C.M. JACOBSON, R. KAITA, T. KOZUB, B. LEBLANC, M. LUCIA, R. MAINGI, E. MERINO, J. SCHMITT, D. STOTLER, PPPL, T.M. BIEWER, J.M. CANIK, T.K. GRAY, ORNL, S. KUBOTA, W.A. PEEBLES, UCLA, P. BEIERSDORFER, LLNL, K. TRITZ, JHU, G. BODNER, UW — LTX is a modest ST with $R=0.4$ m, $a=0.26$ m, and elongation = 1.5. Lithium is deposited on a conformal copper liner faced with stainless steel, which may be heated to 350C to provide a molten lithium PFC, or operated at lower temperatures with solid lithium coatings. In 2010 and 2011, solid coatings of lithium, applied at the start of a run day, were explored. DEGAS2 analysis indicates that recycling coefficients of 0.7 to 0.8 were achieved. In 2012 experiments used molten lithium films at temperatures up to 350C. With a static molten film of lithium, impurities segregated to the surface, and discharges were neither low recycling nor free of impurities. In 2013 an electron beam will be used to heat and stir a lithium pool in the lower portion of the liner, to eliminate surface films and maintain a clean lithium surface. An overview of results will be presented.

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