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Effect of Lithium PFCs on impurity ion content in LTX¹ JACK HARE, DENNIS BOYLE, ROBERT KAITA, RICHARD MAJESKI, PPPL, JOEL CLEMENTSON, PETER BEIERSDORFER, LLNL — The Lithium Tokamak Experiment (LTX) investigates Li coatings as the main plasma-facing component (PFC) which are expected to reduce ion impurity content in the plasmas. High densities of impurity ions, such as C, O, Fe, and even Li, may cool the plasmas by line radiation. Presently, solid lithium is used in LTX, but soon liquid Li will be tested as a PFC. To survey the ion impurity contents in LTX plasmas, an extreme ultraviolet (EUV) spectrometer has recently been installed, capable of distinguishing wavelengths in the range 40-400 Å. These EUV spectra are beneficial for impurity diagnostics since a multitude of low- to high-Z ions emit strong line radiation in this interval. The EUV spectrometer will study how the Li coatings affect the impurity content in LTX.

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