

Surface Conditioning Techniques and Their Effect in NSTX

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High performance operating regimes have been achieved on NSTX through impurity control and wall conditioning techniques. These techniques include HeGDC-aided boronization using deuterated trimethylboron, inter-discharge HeGDC, 350°C PFC bake-out followed by D₂ and HeGDC, and experiments to test fueling discharges with either a He-trimethylboron mixture or pure trimethylboron. The impact of this impurity and density control program on recent advances in NSTX plasma performance will be discussed.