

Abstract Submitted  
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**Development of o-carborane boronization for MST<sup>1</sup>** JINSEOK KO, DANIEL DEN HARTOG, JOHN GOETZ, PETER WEIX, STEVE LIMBACH, University of Wisconsin - Madison — A boronization technique using o-carborane sublimation, which is much safer and simpler than those using diborane or trimethylboron, is being developed for MST. Due to the pulsed nature of the wall-conditioning discharges used in MST, efforts have been made to increase the repetition rate of the discharges in order to increase the boronization duty cycle. The gaseous o-carborane, created by heating a powder, can be injected in a pulsed manner. In this case, throughput is enhanced by the flow of helium, the working gas of the discharge, but is limited by the short opening time of the puffing valve. Density control and plasma parameters such as D-alpha and impurity radiation will be compared before and after the boronization. Two aluminum coupons flush with the inner wall of the MST vessel, one located near the o-carborane injection port and the other opposite to it, will be used to analyze the film and to examine the uniformity of the coating.

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Jinseok Ko  
University of Wisconsin - Madison

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