

Abstract Submitted
for the GEC15 Meeting of
The American Physical Society

High Power Helicon Plasma Source for Plasma Processing JAMES PRAGER, TIMOTHY ZIEMBA, KENNETH E. MILLER, Eagle Harbor Technologies, Inc. — Eagle Harbor Technologies (EHT), Inc. is developing a high power helicon plasma source. The high power nature and pulsed neutral gas make this source unique compared to traditional helicon source. These properties produce a plasma flow along the magnetic field lines, and therefore allow the source to be decoupled from the reaction chamber. Neutral gas can be injected downstream, which allows for precision control of the ion-neutral ratio at the surface of the sample. Although operated at high power, the source has demonstrated very low impurity production. This source has applications to nanoparticle productions, surface modification, and ionized physical vapor deposition.

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Date submitted: 19 Jun 2015

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