1. Title:	Resist Outgassing and Exposure using the Energetiq EQ-10 Electrodeless Z-Pinch EUV Light Source
2. Full names of all authors:	Stephen F. Horne, Matthew M. Besen, Donald K. Smith, Paul A. Blackborow, Deborah S. Gustafson

3. Abstract body:

Formulating high sensitivity and high resolution EUV Resists is the most critical issue gating the adoption of EUV lithography. The ability for the resist manufacturers to quickly screen the outgassing rates and the sensitivity of EUV resists can facilitate faster formulation of a production-ready EUV photoresist. We will present results from standalone tools for resist outgassing and exposure that has enabled screening of EUV resists. The systems integrate with the EQ-10 Electrodeless Z-Pinch EUV light source. We will show data from a system which exposes multiple 1cm x 1cm areas on resist coated wafers with 13.5nm in-band (+/-3%) EUV light. The 10W EUV source allows exposure time of the order of 1 minute using a simple plane multilayer mirror and pumped and purged beamline. During exposure, GC-MS or RGA can be used to capture the outgassing of the test resist. Since accurate determintion of resist sensitivity and outgassing rates require accurate dose control, we will show results from the EQ-10 demontrating the repeatabilty and accuracy of the dose control. The data will also show broadband EUV exposure of wafer samples directly through a foil for high power exposure.