Abstract Submitted
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Particle-In-Cell simulation of ion beam extraction REGIS JOHN, DAVID CARON, EARL SCIME, West Virginia University — An Object-Oriented Particle-In-Cell simulation is developed using OOPIC Pro to model the extraction of a plasma generated by an RF source through an aperture of size 5mm by 5mm. The extraction field is created by a biased wafer outside of the source chamber. For comparison to the model results, measurements of the ion velocity distribution function are obtained with a confocal laser induced fluorescence diagnostic system. The extraction geometry creates ion beamlets used in advanced semiconductor fabrication. The objective of the simulation is to identify (and then validate) the experimental conditions that optimize beamlet formation.

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