

Nanoscale Plasma Etching

Colin Welch, Oxford Instruments Plasma Technology

Abstract

Plasma etching has been vital for device fabrication in the semiconductor and other industries for over 40 years. This presentation will focus on the extension of plasma etching (a subtractive approach) into the nanoscale era and its continuing crucial role in nanotechnology.

A brief introduction to nanotechnology and an overview of plasma etching principles will be given, followed by a detailed discussion of the difficulties of nanoscale etching and what can be done to overcome these challenges. Examples in nanoscale etching of silicon will follow, including some tricks for extending the capability, then further examples in metals and other materials etching from recent Oxford Instruments experience.

ultraprecision.org