

Basic Mechanisms in Plasma Etching

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Plasma etching mechanisms will be reviewed from both a historical perspective and how they relate to the need and ability to carry out atomic layer etching. Some basic principles relevant to plasma etching such as evaporation rates, Langmuir Hinshelwood adsorption, ion-assisted reactions and sidewall passivation will be discussed. Etching mechanisms of selected materials in fluorine and chlorine-containing plasmas will be reviewed. Problems for atomic layer etching including multilayer halogenation and photo-assisted etching will be covered.