132b Development of a New Platform of Fluorinated Photoresist Polymers

Karl R. Krause, Kenneth W. Leffew, George N. Lewis IV, A. Stephen Frobese, and Mani P. Ganti

Bringing new photoresist polymers to market requires meeting a challenging set of technical and business criteria imposed by the semiconductor industry that, in many ways, goes beyond the requirements for conventional chemical process development. DuPont is developing a new platform of fluorinated polymers, based on tetrafluoroethylene and proprietary fluorinated monomers, for 193nm and 157nm imaging that delivers the improved resolution and transparency demanded by the never ending push to smaller and smaller features. The tools, practices, and experience that DuPont are using to bring these new polymers from the lab to commercial reality will be presented in a way that focuses on the key obstacles specific to this industry and how they have been overcome.