

Extreme UV lithography now. What happens tomorrow?

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Extreme UV (EUV) lithography has come a long way over the last two decades, starting from small field demonstration systems through full-field alpha tool scanners installed in 2006 at CNSE, Albany, USA and IMEC, Leuven, Belgium to multiple pre-production tools installed at customer locations since 2010.

Starting with a historical perspective, this presentation will review the mid-term challenges, such as source power scaling and mask cleanliness. We will discuss how EUV can be extended for several nodes by a combination of advanced illumination schemes, higher numerical aperture and potentially a new wavelength.

Worldwide research activities supporting this EUV extension will be shared and discussed.

Finally, progress and challenges of complementary imaging technologies (like directed self-assembly) will be discussed.