

## Technology Profile Fact Sheet

**Title:** Method of Fabricating Nanometer Patterned Device Using Sacrificial Spacer Layer

**Aliases:** None

**Technical Challenge:** Enables precise line width control of patterned optoelectronic and microelectronic devices. Technology should be useful for applications requiring nanometer precision features.

**Description:** By using conventional deposition and etch steps, nanometer tolerance shadow masks can be made using low-resolution lithographic techniques. The method enables the fabrication of line widths and features with resolution appreciably finer than the Rayleigh limit.

**Demonstration Capability:** The precise gaps that constitute the most difficult step of the method have been demonstrated.

**Potential Commercial Application(s):** The fabrication method reduces cost by enabling nanometer feature definition without requiring expensive e-beam or deep UV lithography.

**Patent Status:** A patent application has been filed with the USPTO.

**Reference Number:** 1442.