

Motorola shows 30-nm images with nano-imprint  
By Mark LaPedus, Semiconductor Business News  
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SANTA CLARA, Calif. — Motorola Inc. here today disclosed new details about its internal nano-imprint lithography program, claiming it has demonstrated the ability to print feature sizes down to 30-nm with a tool from a U.S. startup.

Douglas Resnick, a manager at Motorola Labs in Tempe, Ariz., said the lab is using a tool from startup Molecular Imprints Inc. (MII, Austin, Texas) to demonstrate the feasibility of nano-imprint lithography in future device production. Last year, MII rolled out a nano-imprint tool geared for sub-100-nm designs.

Motorola has printed 100- to 30-nm images with the tool from MII. Resnick showed a cross section of a template which demonstrated a 30-nm imprinted feature. “We are also making holes and pillars very nicely,” Resnick said during a presentation at the SPIE Microlithography conference here.

“Is nano-imprint just a lab curiosity? I don't think so,” he said. “It's viable. But is it a real next-generation lithography candidate? Of course not.”

Some believe nano-imprint lithography is geared for niche-oriented applications, such as MEMS and related devices. There are several problems with nano-imprint lithography, namely defects and alignment accuracy.

“I don't think the problem is overlay,” he declared. “The real problem is the infrastructure,” he said, referring to the ability to make photomasks and resists for the technology.