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## Dainippon Screen and Nikon Announce Joint Development Effort for Next-Generation Photolithography

Dainippon Screen Mfg. Co., Ltd (headquartered in Kamigyo-Ku, Kyoto; Akira Ishida, President; hereinafter referred to as Dainippon Screen) has entered into a collaborative agreement with Nikon Corporation (headquartered in Chiyoda-ku, Tokyo; Teruo Shimamura, President; hereinafter referred to as Nikon) for the development of next-generation photolithography processes for semiconductor fabrication. Dainippon Screen has installed its SK-3000 (300mm) coater/developer at Nikon's Kumagaya Plant, where research involving the SK-3000 and Nikon's latest ArF Scanner has already begun.

Lithography challenges are becoming paramount as we enter into the regime of 90nm production and 65nm development. Providing enabling lithographic solutions in accordance with ITRS (International Technology Roadmap for Semiconductors) and customer roadmaps, requires increasingly sophisticated levels of process performance. This level mandates optimized performance of the Coater/Developer and Scanner as a unified system.

Improvements in Critical Dimension uniformity and stability will occur both at the process and system levels. The SK-3000 installed in Nikon's lab will be equipped with a new developing system with higher process performance, and a new resist coating system with improved coating uniformity. An advanced interface between the Coater/Developer and Scanner will be developed along with APC (Advanced Process Control) systems to ensure and improve process stability.

While the scope of the Dainippon Screen / Nikon joint effort is centered on equipment manufactured by the two companies, the ultimate goal is to develop an "open" solution that will provide benefits when either company links their tools with products from other equipment manufacturers.



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<sup>\*</sup>Nikon has also announced the statement at the same time in Tokyo.