FOR IMMEDIATE RELEASE

RASIRC Announces Dry Peroxide™ Oxidant at ALD 2013

Company will present poster session and exhibit

San Diego, Calif. – July 23, 2013 – RASIRC® announced today that it will begin public discussions on its new Dry Peroxide vapor delivery system at the upcoming Atomic Layer Deposition (ALD) conference in San Diego July 28-31, 2013. The company will present a poster on the topic "*New Hydrogen Peroxide Vapor Delivery Systems for Surface Preparation and ALD*" on Monday, July 29. RASIRC will also have a booth space for detailed discussions. RASIRC products focus on high purity vapor delivery for ALD, oxidation, surface preparation and cleaning.

Surface preparation is critical in preventing defects at the interface between high-k dielectric and channel materials. Hydrogen peroxide is superior to both ozone and water, when delivered in sufficient concentration and at a consistent flow rate. It can remove surface contaminants including carbon and selectively grow a contiguous hydroxyl surface, while avoiding damage to device structures that can be caused by ozone.

"Dry peroxide is a revolutionary development for nanoscale semiconductor processing. It provides the first safe and stable way to use high concentrations of H_2O_2 in the ALD process," said Jeffrey Spiegelman, RASIRC Founder and President. "The initial market response is indicative of a breakthrough technology. ALD technologists now have a new tool for creating thinner device structures at lower temperatures. This could jump start organic substrates for ALD."

Historically it has been difficult to deliver hydrogen peroxide in sufficient concentration due to Raoult's Law, which causes preferential selection of water molecules from the H_2O_2 solution. Most researchers were unaware of this phenomenon, leading to the misperception that there are minimal differences between H_2O and H_2O_2 in ALD. RASIRC technology compensates for Raoult's Law, overcoming the concentration issue.

Recent results with Hafnium and Aluminum precursors show that Dry Peroxide both provides a uniform initiation layer and accelerates the oxide growth rate when compared to water or standard H_2O_2 in water. Additional tests show the ability to remove carbon from Ge and SiGe substrates. Test results will be described in the poster session.

"RASIRC's unique hydrogen peroxide technology will enable our customers to reduce EOT and incorporate new materials needed for advanced devices including 3-D structures," said Lita Shon-Roy, RASIRC Director of Marketing. "This year's conference is focused on the industrialization of ALD. We look forward to working with OEMs to commercialize this new technology."

More information about vapor delivery systems and Dry Peroxide is available directly from RASIRC.

About RASIRC
RASIRC products purify and deliver ultra-pure liquids and gases. First to generate ultra-high purity (UHP) steam from de-ionized water, RASIRC technology now also delivers hydrogen peroxide vapor in controlled, repeatable concentrations. It reduces cost, increases yield, and improves safety. RASIRC vapor delivery systems, humidifiers, closed loop humidification systems, and steam generators are critical for many applications in semiconductor, photovoltaic, pharmaceutical, medical, biological, fuel cell, and power industries. Call 858-259-1220, e-mail info@rasirc.com, or visit www.rasirc.com.

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