FOR IMMEDIATE RELEASE

RASIRC to Exhibit and Present at Joint EUROCVD and Baltic ALD Conference

Company to present Brute Hydrazine results for low temperature titanium nitride

San Diego, Calif – June 6, 2017–RASIRC will present and exhibit at the Joint EUROCVD 21 and Baltic ALD 15 Conference held June 11-14 in Linköping, Sweden. The poster presentation "*Low temperature titanium nitride ALD: low resistivity by use of ultra-high purity hydrazine*" is scheduled for Monday, June 12. RASIRC will also present the latest findings related to novel reactive chemistries for in-situ surface functionalization at Stand #8.

Sub-400°C metal nitride deposition is required for next generation logic and memory devices due to thermal sensitivity of new materials. Hydrazine is a viable precursor for low temperature nitride ALD applications. Initial tests show significant reduction in oxygen in TiNx films deposited using a new RASIRC ultra-high purity delivery system at 350C.

"Brute Hydrazine is a leading candidate to solve low temperature challenges when growing ALD films in three dimensional, HAR structures," said Jeffrey Spiegelman, RASIRC President and Founder. "This new chemistry can overcome problems associated with ammonia plasma to enable process engineers to incorporate these nitride metals into new device design."

New reactive molecules are also needed for surface functionalization and area selective deposition (ASD). In these applications, the molecules selectively react with or protect surfaces from reaction. They can be applied and removed as needed throughout device manufacture. Design constraints require these molecules to react with only select surfaces, cause no damage or sub-surface oxidation, and function at low temperatures.

Both hydrazine and hydrogen peroxide have novel characteristics that make them strong candidates for ASD and surface functionalization. Hydrazine has a weak N-N bond and is more reactive than ammonia. Hydrogen peroxide has a very weak O-O bond, is a stronger oxidant than water and is less oxidizing than Ozone.

"Area selective deposition is an important technique in manufacturing complex, 3D device structures," said Spiegelman. "Our BRUTE chemistries are targeted specifically for process engineers working on selective etch and deposition."

RASIRC BRUTE® Peroxide and BRUTE Hydrazine both use a proprietary delivery system to enable delivery of pure gases. The company recently released a compact Laboratory version. This plug-and-play version enables universities, research institutes and advanced technology groups to work with the smaller amounts of chemistry for rapid thin film process screening.

Exhibit Stand

Conference attendees are invited to visit RASIRC at Stand #8. Representatives will be available to answer any questions and discuss exciting results from recent customer testing. Stop by to get the latest research papers and see a demonstration model of our unique solvent-based delivery system for safety, used for BRUTE Hydrogen Peroxide and BRUTE Hydrazine. Also learn about the Peroxidizer® for high-volume surface hydroxylation and atomic layer deposition. Ask about Hydrogen Peroxide Steam.

About RASIRC

RASIRC specializes in products that generate and deliver gas to fabrication processes. Each unit is a dynamic gas plant in a box—converting common liquid chemistries into safe and reliable gas flow for most processes. First to generate ultra-high purity (UHP) steam from de-ionized water, RASIRC technology can now also deliver hydrogen peroxide gas and hydrazine gas in controlled, repeatable concentrations. RASIRC gas delivery systems, humidifiers, and closed loop humidification systems are critical for many applications in semiconductor, photovoltaic, pharmaceutical, medical, biological,

fuel cell, and power industries. Call 858-259-1220, email info@rasirc.com or visit http://www.rasirc.com.

#####

Contacts:

RASIRC

Jeffrey Spiegelman

Phone: 858-259-1220

E-mail: jeff@rasirc.com