



FOR IMMEDIATE RELEASE

RASIRC Presents Hydrazine as Low Temperature Nitride Source at Critical Materials Conference

Describes materials challenges for high volume manufacturing

San Diego, Calif – May 17, 2016 –RASIRC today announced that Chief Technology Officer Dan Alvarez, PhD presented *Hydrazine as a Low Temperature Nitride Source: Materials Challenges for High Volume Manufacturing* at the recent Critical Materials Conference. The conference , held May 5-6, 2016 in Hillsboro, Oregon, focused on materials and supply-chains for current and future semiconductor manufacturing.

The RASIRC presentation focused on hydrazine as a new molecule for Atomic Layer Deposition and thin film processing for advanced devices and 3D structures. RASIRC has observed an increasing need for low temperature nitride deposition for silicon nitride barrier layers and etch stops, multiple patterning, titanium nitride electrodes, tungsten nitride barrier layers, and barrier layers for copper. Ammonia is reaching limitations due to reduced thermal budgets and plasma methods may be overly aggressive or lead to non-uniformity in HAR structures. Studies show that gas phase hydrazine is a promising new material for these applications.

“Hydrazine gas is highly reactive at low temperatures and shows higher growth rates, density and resistivity,” said Alvarez. “The challenge is in delivering the gas in a safe and consistent manner, which we are able to do.”

Conference speakers and attendees were enthusiastic about the increased adoption of new materials and the consequent need for ALD. Hydrazine gas as described by Alvarez received a positive response. Alvarez used low temperature passivation on silicon germanium as an example of a plasma-free process that uses hydrazine to passivate the dangling bonds and maintaining an electrically unpinned surface ready for subsequent functionalization.

“Early process results using BRUTE Hydrazine are very positive and indicate that this molecule will help enable future technology nodes,” said Jeff Spiegelman, RASIRC President and Founder.

For more information, [request a copy of the presentation](#). Additional information is also available for [BRUTE™ hydrogen peroxide](#) and [BRUTE™ hydrazine](#).

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 steam from de-ionized water, RASIRC technology can now also deliver hydrogen peroxide and hydrazine gases in controlled, repeatable concentrations. RASIRC gas 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 +1(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