



FOR IMMEDIATE RELEASE

RASIRC Presents Novel Reactive Chemistries for in-situ Surface Functionalization
Company presents poster at Area Selective Deposition conference

San Diego, Calif – April 19, 2017–RASIRC will present at the Area Selective Deposition workshop held April 20-21, 2017 in Eindhoven, The Netherlands. The poster describes novel reactive precursors that allow thermal functionalization of surfaces at low temperature. Chief Technology Officer Daniel Alvarez will present the poster *Novel Reactive Chemistries for in-situ Surface Functionalization: New Tools for Area Selective Deposition* on Friday April 21.

New reactive molecules are needed for area selective deposition (ASD). These reactive precursors must work at low temperatures, selectively react with some surfaces, and not cause surface damage or sub-surface oxidation. They also must be removable and versatile for additional functionalization of film growth. The RASIRC poster presentation focuses on the novel characteristics of hydrogen peroxide and hydrazine for this application.

Hydrogen peroxide is a stronger oxidant than water and less oxidizing than Ozone. It has a very weak O-O bond, with bond energy of 36 kcal/mole. As a result, hydrogen peroxide nucleates surfaces more efficiently than water without damaging surfaces. Studies show promising results for use in area selective deposition.

Hydrazine is more reactive than ammonia and has a weak N-N bond, with bond energy of 55 kcal/mole. As a result, hydrazine enables low resistivity at low temperatures.

The poster also presents a method for delivering these reactive chemistries in a controlled, safer and truly anhydrous manner.

“Area selective deposition is a key area for the continuation of Moore’s Law,” said Jeffrey Spiegelman, RASIRC President and Founder. “Our new chemistries are well suited to assist process engineers in this area.”

RASIRC [BRUTE® Hydrazine](#) and BRUTE Peroxide uses a proprietary chemical formulation to deliver ultra-high purity gas from a liquid source that is safer and has quantified low water levels. The company recently released a compact Laboratory version designed for use under vacuum draw. This plug-and-play version enables universities, research institutes and smaller testing environments to work with the chemistry without changing the laboratory tools.

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>.

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