



FOR IMMEDIATE RELEASE

RASIRC Enables Low Temperature Group III Metal-Nitride Deposition

Company highlights use of a novel hydrazine source at Compound Semiconductor Week

San Diego, Calif – May 15 2019 – [RASIRC](#) will introduce a novel hydrazine delivery system for reduced temperature Group III Metal-Nitride deposition at the [Compound Semiconductor Week 2019 Workshop](#) (CSW), Nara, Japan held May 19-23. RASIRC Chief Technology Officer Dr. Daniel Alvarez will present “*Enabling Low Temperature Aluminum Nitride ALD by Use of a Novel Hydrazine Source*” during the event’s poster session on May 21. The poster will compare growth characteristics and film properties for TMA/Brute Hydrazine versus TMA/Ammonia.

“There is an emerging need for low temperature III-Nitride deposition in order to prevent unwanted atomic diffusion of nearby metals and metal alloys. Utilization of hydrazine is thermodynamically more favorable due to the reactive nature of the N-N bond,” says Alvarez. “Hydrazine has been available commercially for many years, but not in a pure enough form needed for semiconductor manufacturing.”

RASIRC President and Founder Jeffrey Spiegelman adds, “The use of hydrazine will enable our customers to have larger process windows while reducing costly precursor consumption found with sources like Indium.”

CSW Workshop is a joint venue for the 46th International Symposium on Compound Semiconductors (ISCS) and the 31st International Conference on Indium Phosphide and Related Materials (IPRM). ISCS is an international conference focusing on III-V, II-VI and IV-IV semiconductors and covers the scope of a variety of compound semiconductors used in modern electronic devices. IPRM is known as the leading

worldwide conference on indium phosphide and related materials, from physics to its applications.

Dr. Alvarez will be available throughout the event to discuss the RASIRC precursor chemistry product line-up, which includes hydrazine, hydrogen peroxide and more. Information about RASIRC products will also be available in the Taiyo Nippon Sanso Corporation (TNSC) exhibition stand.

About RASIRC Products

BRUTE[®] Hydrazine enables uniform nitride deposition for Silicon and early transition metals at low temperature. BRUTE Hydrazine may also be used as an atomic hydrogen source, where metals such as Ru, Cu, and Co may be cleaned and reduced. Hydrazine gas is generated in situ and is virtually water free. Brute Hydrazine has been formulated for a relatively high flash point for safer handling.

BRUTE Peroxide is a novel oxidant that improves nucleation density at film interfaces when compared to other oxidants. Surface functionalization is more dense and initiation is faster using anhydrous hydrogen peroxide gas compared with alternatives. This enables better selectivity and less damage to metal surfaces in ASD processes.

RASIRC Peroxidizer[®] provides high volumes of reactive H₂O₂/H₂O mixtures for high throughput ALD. This reactive gas generator is ideal for roll-to-roll ALD coatings that require high speed deposition at reduced temperatures.

Additional RASIRC products include the RainMaker[®] Humidification System (RHS) and the Hydrogen Peroxide Steamer (HPS). The RHS generates water vapor for oxidation applications and the HPS provides surface cleaning, preconditioning, wet thermal oxidation and residual carbon removal.

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

safer and reliable gas flow for most processes. RASIRC technology delivers water vapor, 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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