



FOR IMMEDIATE RELEASE

RASIRC Presents Low Temperature ALD of Titanium Nitride at MAM 2017
Company Shows Low Resistivity Results Enabled by Ultra High Purity Hydrazine

San Diego, Calif – March 23, 2017–RASIRC will present at the Materials for Advanced Metallization conference held March 26-29, 2017 in Dresden, Germany. The poster describes an innovative chemistry for low temperature nitride films. Chief Technology Officer Daniel Alvarez will present the poster *Low Temperature ALD of Titanium Nitride: Low Resistivity Enabled by Ultra High Purity Hydrazine* on Monday March 27 from 13:45 – 15:30.

New device architectures are driving the need for low temperature ALD methods (<400°C) to grow TiN_x metal gate electrodes. TiN films require low resistivity and must be ultrathin, continuous, defect free and oxygen free. Hydrazine has very promising thermochemistry for this application but has had several challenges as well. The poster presents a method to overcome these challenges and results that show reduced flammability, reduced water contamination and improved low temperature TiN_x film growth on SiON substrate.

“This new TiN metal study shows good feasibility to grow low resistivity TiNitride films at temperatures below 400C. We now have a viable alternative to plasma and high temperature ammonia,” said Jeffrey Spiegelman, RASIRC President and Founder. “This development paves the way for thermal ALD incorporation of ultrathin nitride films in 3D structured devices.”

RASIRC [BRUTE® Hydrazine](#) uses a proprietary chemical formulation to deliver ultra-high purity hydrazine 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 Ultra High Purity Hydrazine

Alvarez will be available throughout the conference to discuss the poster and ongoing research. For more information after the conference, follow up by contacting RASIRC directly at info@rasirc.com.

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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