



FOR IMMEDIATE RELEASE

RASIRC Showcases Ultimate Oxidant and Nitride Precursors at Annual ALD Conference

Company research to be featured in five technical papers, CTO is moderator for precursor sessions

San Diego, Calif – July 22, 2019 – Dynamic gas generation leader [RASIRC](#) will exhibit the latest data on reactive oxidant and nitride precursors for thermal ALD at the annual [ALD Conference](#) held July 21-24, 2019 in Bellevue, Washington. RASIRC is a Gold Sponsor of the highly anticipated event. President and Founder of RASIRC, Jeffrey Spiegelman, will present a poster entitled “*Process Control and Mass Delivery Optimization from Low Vapor Pressure Precursors.*” The company’s Chief Technology Officer Daniel Alvarez will deliver the poster presentation “*TiO₂ ALD with Hydrogen Peroxide: Comparative Study of Growth and Film Characteristics for H₂O₂/H₂O Mixtures, O₃ and H₂O.*” Both poster presentations are scheduled for Monday July 22 at 5:45pm – 7:30pm.

“Emerging device technology continues to compress thermal budgets and increase film deposition complexity.” said Jeffrey Spiegelman, RASIRC President and Founder. “Highly reactive gases like anhydrous hydrazine and hydrogen peroxide are now proving themselves as viable solutions for ALD and ASD.”

Technical Presentations and Posters

Alvarez is co-moderator for Session **AF2-MoA ALD Fundamentals: ALD Precursor I**, 1:30-4:00 on Monday July 22, Grand Ballroom E-G.

Alvarez and Spiegelman are contributing authors to the following presentations and posters:

“TiO₂ ALD with Hydrogen Peroxide: Comparative Study of Growth and Film Characteristics for H₂O₂/H₂O Mixtures, O₃ and H₂O,” Monday Evening Poster Session, July 22 – **AF2-MoP7**

Daniel Alvarez, RASIRC; K. Andachi, G. Tsuchibuchi, K. Suzuki, Taiyo Nippon Sanso Corporation; J. Spiegelman, RASIRC

“Process Control and Mass Delivery Optimization from Low Vapor Pressure Precursors,” Monday Evening Poster Session, July 22 – **AM-MoP8**

Jeffrey Spiegelman, C. Ramos, D. Alvarez, Z. Shamsi, RASIRC

“Low Temperature Aluminum Nitride Deposition: Comparing Hydrazine and Ammonia,” Monday Afternoon Poster Session, July 22 – **AF4-MoA17**

Aswin L.N. Kondusamy, S.M. Hwang, A.T. Lucero, Z. Qin, X. Meng, The University of Texas at Dallas; D. Alvarez, J. Spiegelman, RASIRC; J. Kim, The University of Texas at Dallas

“Investigation of In-situ Surface Cleaning of Cu Films using O₃/O₂ and N₂H₄,” Tuesday Evening Poster Session, July 23 – **AS-TuP4**

Su Min Hwang, A.L.N. Kondusamy, Q. Zhiyang, H.S. Kim, L.F. Peña, K. Tan, J. Veyan, University of Texas at Dallas; D. Alvarez, J. Spiegelman, RASIRC; J. Kim, University of Texas at Dallas

“ALD HfO₂ with Anhydrous H₂O₂ in a 300 mm Cross-flow Reactor – Comparison with H₂O and O₃ Oxidants,” Monday Evening Poster Session, July 22 – **AF2-MoP16**

Steven Consiglio, R. Clark, C. Wajda, G. Leusink, TEL Technology Center, America, LLC

Exhibit Booth

Conference attendees are invited to visit RASIRC at the Exhibition Area in Booth 101. Representatives will be available to answer questions and discuss the latest research on BRUTE Peroxide and BRUTE Hydrazine. Visitors will also learn about the Peroxidizer® for high-throughput ALD and the RainMaker® Humidification Ampoule (RHA) for select ASD and VCSEL applications.

Product Availability

[BRUTE Hydrazine](#) is available in 250ml and 1.2L replaceable units. [BRUTE Peroxide](#) is available in 300g and 1200g replaceable units. Both BRUTE chemistries are also available in a compact Laboratory edition for use under vacuum draw. 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.

The [Peroxidizer](#)[®] delivers hydrogen peroxide gas in stable, high concentrations from 12,500 to 50,000 ppm, which equates to 1.25 - 5% gas by volume. The system handles gas flows of 5 to 30 slm in vacuum or atmospheric conditions. The RainMaker Humidification Ampoule (RHA) provides precision control of water vapor.

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. 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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