

**IN THIS ISSUE**

- New Sheboygan \$9 million cleanroom opened**
- Investor in People status awarded to SAFC Hitech Ltd**
- Increased presence on line**
- EpiVapor™ to provide vapour delivery of precursors**
- Further developments in Ru precursor chemistry**



Welcome to our latest edition of SAFC Hitech's Insight e-news. We invite you to forward this message to interested parties at your workplace and encourage them to sign up to receive their own copy in the future.

**New Sheboygan \$9 million cleanroom opened**

SAFC Hitech has underlined its commitment to the electronic materials markets with the opening of a \$9 million state-of-the-art cleanroom located on the Company's Sheboygan Falls, Wisconsin campus. The 5,000 square foot facility consists of an ISO Class 4 cleanroom, a distillation suite and office space. The new facility, which became fully operational in late April 2008 provides in-house trace metals analysis and the capability to clean and fill containers in a tightly-controlled environment. It complements existing SAFC Hitech production facilities around the globe to significantly enhance the unit's capabilities.



"One of SAFC's primary business objectives is to continue to build the SAFC Hitech segment into a global leader in the supply of ultra-pure, high quality materials and technical solutions to the electronics industries we serve," commented SAFC President, Frank Wicks.

"As the demand for new and increasingly efficient materials continues to grow, so does the need to attain higher and higher levels of quality and dependability from our products."



"This cleanroom investment will help us to achieve our objectives, essentially providing a 'one stop shop' for manufacturing, analysis and packaging. As a result, SAFC Hitech customers will benefit from high-quality products that meet or exceed specifications, feature significantly reduced quality variations and are delivered on time."



**Investor in People status awarded to SAFC Hitech Ltd**

SAFC Hitech Ltd is proud to announce that on 2nd June 2008, the Bromborough site received formal notification that it had been awarded the coveted Investor in People accreditation. This national quality standard sets a high standard for improving an organisation's performance through its people and is only awarded after Investors in People Assessors have conducted a rigorous review. The examiners look at all operational areas and check that the organisation has met all the criteria listed below:



**INVESTOR IN PEOPLE**

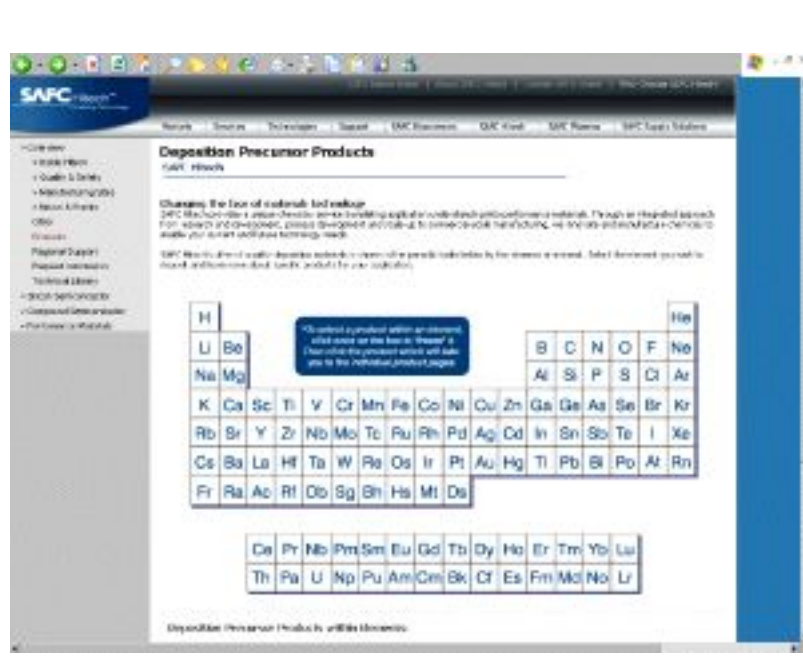
- Is committed to supporting the development of its people
- Is clear about its aim and objectives and what its people need to do to achieve them
- Develops its people effectively in order to improve performance
- Understands the impact that its investment in people has on its performance

Bromborough was first awarded Investor in People status in 2005 for Epichem Ltd. The recent assessment was specifically for SAFC Hitech Ltd and the award is a significant achievement and testimony to the commitment of everyone at the site.

Other organisations that have been recognised by Investor in People include GlaxoSmithKline, BP, Shell, Tesco and Unilever.

**Increased presence on line**

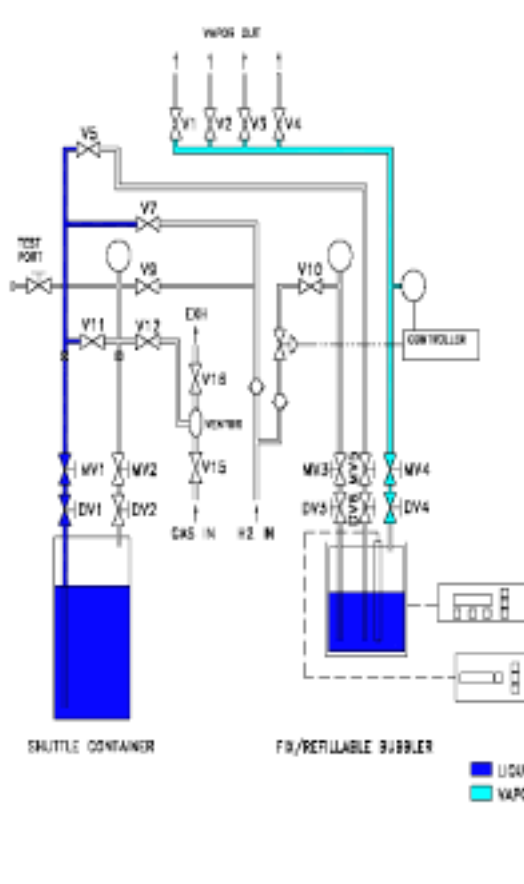
The SAFC Hitech website has undergone a transformation in response to customer requests. The return of the [periodic table interface](#) to allow rapid location of products by element has been introduced to cover all standard products with detailed information a click away for each one. The ability to access MSDS on line is under review to integrate with the currently available Sigma-Aldrich database.



If you have comments about the website please contact us and we will endeavour to address points to provide a continuously improving service.

**EpiVapor™ to provide vapour delivery of precursors**

Reliable, flexible, highly controllable dosimetry of organometallic precursors is key to production environments where downtime is prohibitively expensive. The EpiVapor™ system builds on proven EpiFill™ technology [1,2] to offer gas phase delivery of chemical vapors directly to multiple deposition tools in a safe, reproducible fashion. Flux stability ensures processes can be run at full capacity without stoppages to change out tool bubblers thus maximising efficiency and reducing operational costs without compromising ultra high performance levels.



Specifically designed for pyrophoric, highly sensitive compounds the EpiVapor™ system is supported by a team of experts focussed on safe handling of these materials without contamination to consistently meet and surpass semiconductor quality standards.

For further details of this new product please contact your local SAFC Hitech representative.

Ref [1] = Patent WO0142539, Ref [2] = Patent WO0212780

**Further developments in Ru precursor chemistry**

In recent years Ru has gained a significant following for use in the Semiconductor Industry and improved precursors have been the focus of many research groups. SAFC has developed a number of exciting new precursors which have been reported previously but a new series has just been tested and found to give a further advance in performance. Details have been submitted to the ALD 2008 conference and highlight the in-house deposition results achieved.

The chemistry of the new sources is based on Ru(0) oxidation state and it has been found that ALD growth using hydrogen is possible to allow the first demonstration of Ru films without the use of oxygen. This novelty has interest to improve purity of the achievable films and the interface region with various underlying layers and thus improve device performance.

A feature article will be presented in the next SAFC Hitech newsletter.

