

5 Dec 2006

Dear user

Welcome to our latest electronic edition of Epichem News. We invite you to forward this message to any interested parties at your workplace and encourage them to sign up to receive a copy directly in the future.

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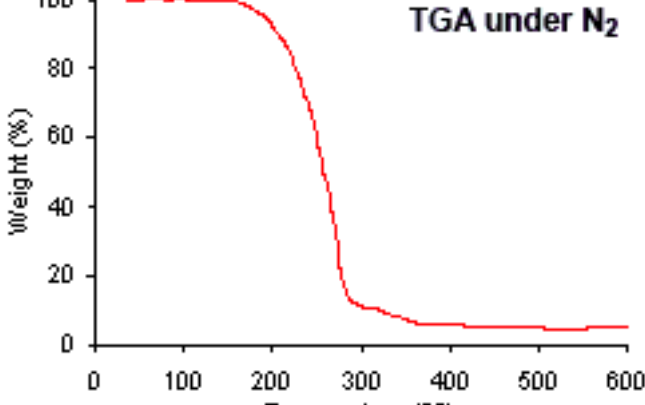
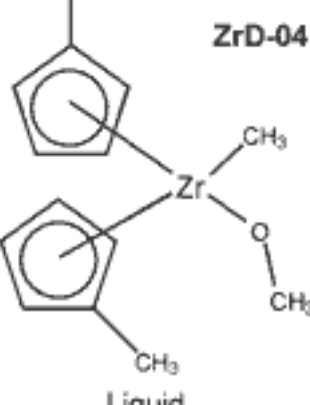
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New Zr sources for ALD of ZrO₂

Following the successful development of new Hf precursors for HfO₂ ALD to allow much improved process control and performance, Epichem's research team have transferred the technology to Zr precursors.

The molecule ZrD-04 has proven to offer advantages over existing source materials to allow optimum film growth parameters to be employed without layer quality degradation. The liquid ZrD-04 compound is particularly exciting in highly demanding next generation semiconductor structures fabricated using the ALD technique due to the excellent conformal coverage demonstrated. For full details please contact the Epichem technical team.



Both Zr and Hf derivatives are detailed in an ongoing Global patent application and are proprietary to Epichem.

Analytical Services Now Available



Epichem has always focussed resources on state of the art analysis facilities to enable the highest quality characterisation of all its products. The extensive range of equipment assembled can provide a comprehensive assessment of contamination levels to extreme sensitivities using in-house protocols to maximise tool performance. The UK department has now opened its doors to custom analysis services for external clients to take advantage of the facilities available. For a complete review of the characterisation techniques available, detection limits and costing rates please contact the Bromborough office directly.

Kicking Off New Research Topics

Participating in collaborative research projects is a key factor in Epichem's research strategy to develop precursor systems in an effective manner to meet current and future demands. Our success in this area is highlighted with the launch of two further EU supported projects as detailed below to add to those currently running. All funded projects have overcome stiff opposition from competing submissions to receive support by being rated at the top of those reviewed. Epichem is always interested in new research partnerships and so please contact your local office on ways to further closer interactions.

MACOMUFI

Manipulating the Coupling in Multiferroic Films
EU Funded.

Partners: Thales, Nanotec, Technoorg Linda, Crystec, CNRS CRISMAT, UMP, ICMCB and LMGP, Universities of Bonn, Liege, Groningen, Geneva, Barcelona

Summary: The general project objective is to understand, synthesise and control novel robust multiferroic materials in thin films that exhibit a significant magnetoelectric coupling at room temperature. The knowledge and materials developed will be applied to many important electronics market segments. Novel sources for various CVD techniques will be studied to afford the desired alloy compositions to achieve improved layer properties. All aspects of the fabrication process for optimum chemicals will be studied.

<http://www.macomufi.eu/spip.php?rubrique1>



3D-DEMO

Single Step 3D Deposition of Complex Nanopatterned Multifunctional Oxide thin films
EU Funded.

Partners: EPFL, SAES Getters, ABCD, SCIPROM, CNRS FEMTO, NIL Rumania, ORC Southampton

Summary: The project will focus on thin film deposition using Laser Assisted Chemical Beam Epitaxy and new effusive source technologies. This technique allows both 3D growth and patterning in the sub micron range. The target materials are ferroelectric oxides for applications in integrated optoelectronics, optics and photonics. Novel sources and their combinations to form complex oxides will be studied to optimise performance in this new approach to layer deposition.



New Chemical Handling Regulations

In 2007 a new legislation is to be introduced aimed at global harmonisation of the safety protocols for chemicals. Christened REACH (Registration, Evaluation and Authorisation of Chemicals) there will be far reaching effects on chemical handling and so Epichem is working to introduce upgraded practices to ensure compliance. We will be advising all customers of the impact of these changes as they are introduced to ensure the stricter regulations are met in all cases.

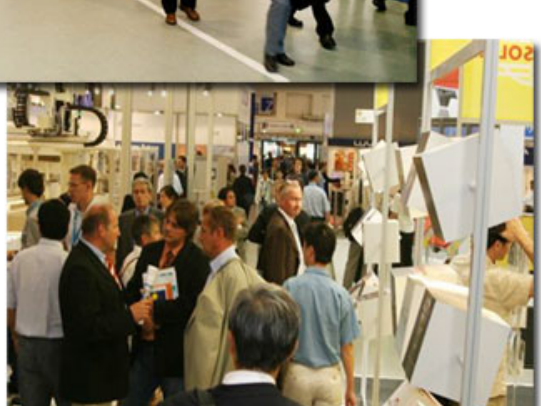
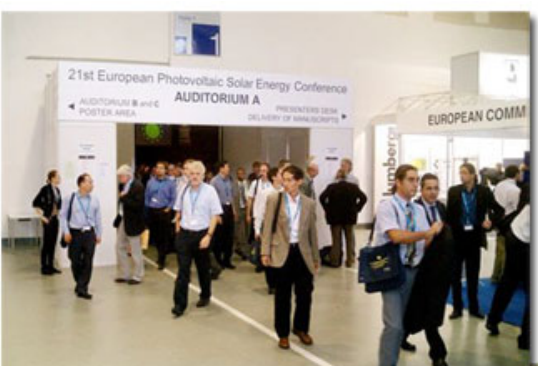


For further details on REACH please refer to the EU briefing document and be aware that the Child, Worker and Consumer-Safe Chemicals Act in US is set to create similar regulations to that imposed by the REACH program and similar legislation is progressing world wide.

http://ec.europa.eu/environment/chemicals/reach/reach_in_brief04_09_15.pdf

Epichem Out and About

Continuing its customer support program, Epichem personnel have been at major conferences around the globe to talk to customers and answer any queries. Discussions on new innovations in the precursor range have been held to make all aware of the most recent developments and technical advances across all product areas. From Photovoltaics in Dresden to III-V in San Antonio and Crystaltaic in Edinburgh to Oxides in Boston our enthusiastic team has been busy providing information on precursor solutions for customer processes. We look forward to seeing more visitors at forthcoming conferences and workshops.



Customer Survey: Draw Reminder



The annual customer survey to assess Epichem performance and highlight areas of concern as well as those of excellence was sent out recently and we wish to thank all of those customers who have already responded. For those who have not filled in the form we would encourage you to take a few minutes to complete the survey and return it before the 22nd of December 2006 to ensure you are entered into our prize draw for an iPod.

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