



advanced customized characterization technologies

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Welcome,

to aixACCT Systems, the world leader in metrology of piezoelectrics.

The fourth newsletter gives you an update on the enhancements at aixACCT Systems that happened over the past two years. Since 2007 aixACCT products are used for material qualification as well as device testing in production environment.



I am very proud that aixACCT Systems has become the company with the largest envelope of metrology systems for piezoelectrics worldwide. We cover the whole range from material testing to mass production control and from inkjet printer thin films to fuel injection multilayer actuators. aixACCT has become a one stop shop for piezoelectric testing.

Happy reading!
Yours sincerely,
Stephan Tiedke

In-line inspection system for piezoMEMS mass production

aixACCT products boost the piezoMEMS market. Benefits of the aixDBLI and aix4PB products are the optimization of the film deposition process in the development stage and quality assurance of the deposited film in a mass production process. This finally ends up in a yield enhancement and guarantees rapid redemption of the investment. aixDBLI and aix4PB obtain the important piezoelectric parameter $d_{33,f}$ and $e_{31,f}$ of thin films precisely. Besides the aixDBLI can handle wafers up to 8". The high resolution and accuracy of the two products allows material qualification of e.g. AlN or PZT. A sigma over mean value well below 1% satisfies industrial requirements for mass production control.





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In 2005 aixACCT has delivered the first system of its aixDBLI Double Beam Laser Interferometer series. Since 2007 a full automatic system including wafer robot is available in order to satisfy high throughput needs from industry. Several 10 Mio. pieces per year or several thousand wafer per day are goals of this industry.

A real compliment was given to aixACCT engineers by one of our industry users after successful installation of an automated aixDBLI system: „We trust in the tool and we trust in the company“

aixDBLI certified by TUV Rhineland North America

The aixDBLI system for in-line inspection of piezo MEMS has been certified by TUV Rhineland to comply with standards according to Semi S2 and S8.

EPCOS derives figure of merit of piezoelectric multilayer by aixACCT products

EPCOS is the world leading supplier of multilayer actuators for fuel injection systems. EPCOS is using a customized aixACCT test system for material development and failure studies of bulk ceramics and multilayer actuators.



“The modular concept of the aixACCT products has been one of the convincing arguments for us to acquire the combined aixPES and aixCMA test system”, says Dr. Christian Hoffmann head of corporate materials R&D of ceramic components division at EPCOS in Deutschlandsberg / Austria.

„The capability to evaluate both materials and processed devices enables us to correlate the results of material and device tests. This ends up in the important separation of pure material characteristics and device specific changes. The aixCMA setup allows us to derive the figure of merit of our ceramic multilayer actuator. This helps significantly to communicate the excellent performance of our product.“



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Flexibility of modular system concept of TF ANALYZER is convincing for Argonne National Laboratory

Argonne National Laboratory has acquired a Material Analyzer system from aixACCT, which allows testing of ferroelectric, dielectric, piezoelectric and magnetoresistive materials. High speed as well as high resolution measurements were implemented into one and the same system. Additionally, high-resolution testing for high-voltage measurement of interdigitated structures is implemented. „We require the unique combination of capabilities offered by this equipment. The customized adaptation of the whole characterization system to our specific needs has been essential for the various measurement problems that we had“, says Stephen Streiffer, now acting director of Argonne’s Center for Nanoscale Materials.

Meet aixACCT at Electroceramics XI conference

aixACCT Systems will be exhibitor at the Electroceramics XI conference in Manchester, from 1st to 3rd of September 2008. Meet Klaus Prume, Manager Piezo Test Systems, at the exhibition. Please contact us for a prior engagement at the exhibition. Klaus will be ready for discussion on our various test systems for material as well as device characterization. aixACCT Systems is sponsor of the characterization workshop which will be held adjacent to the conference on September 4th.

ELECTROCERAMICS XI
MANCHESTER 2008

Klaus Prume serves as session chair at SMASIS conference



Klaus Prume will serve as a session chair for the Application sessions at the new ASME Conference on Smart Materials, Adaptive Structures and Intelligent Systems (SMASIS) which will be held from October 28th to 30th, 2008 in Washington D.C area. Please visit the conference web page for more details:

<http://www.asmeconferences.org/SMASIS08/index.cfm>

Klaus is our research expert and works also in the field of FEM simulations and characterization of piezo MEMS structures.