VacSys

Chemical Microanalysis Solutions

- Corrosion
- Thin Fims
- Ceramics
- Catalysts
- Semiconductors
- Polymers
- Fibres
- Medical implants
- Environmental
- Water processing
- Textiles
- Paper
- etc., etc.

Solutions Through Materials Analysis

Figure 1 High performance XPS instrument for non-destructive chemical and elemental analysis of materials. The instrument is also capable of high spatial resolution chemical images.

Materials failure is common, for example they corrode or the paint blisters or two parts do not stick together properly, etc., etc.

Companies strive to create new materials with properties more suitable for their desired use.

One common factor is a requirement to better understood the spatial distribution of elemental and chemical species on a material surface.

At VacSys we not only design and manufacture XPS, AES and UPS instruments but also provide a range of services to help solve our clients problems

Services

• Sample Analysis

The analysis of client samples and a report. Sample turn around by mutual agreement

• Sample Analysis with Client

Interactive sample analysis with client present during the analysis.

• Projects

Our Scientists, engineers, business and marketing experts can work with clients on special projects to help development, production and product quality. Contact us for an informal discussion.

• Instrument Loan

Production problem?
Quality control problem?
Product failures?
Product lifetime issues?
Product development?
Can't send samples out due to secrecy?
Need an on onsite solution?

Our mobile XPS instrument can be deliverd, installed and training provided in operation and analysis of data. We can also provide an operator or assist with data intrepetation
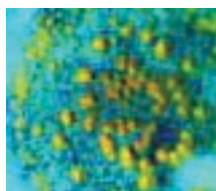
... everything you need to solve your problems...

X-Ray Photoelectron Spectroscopy (XPS)

XPS is a surface sensitive analytical technique which provides **Quantitative Elemental and Chemical Information.** It can be used in a number of different modes to maximise collection of valuable information.

Large Area XPS (LAXPS)
- around 10mm^2 analysis area
- average composition
- quantatative information
- chemical information
- elemental information
- non-destructive

Small Area XPS (SAXPS)
Similar to LAXPS plus:
- analysis of small features down to 10 microns

XPS - Linescan
Similar to LAXPS and SAXPS plus:
- chemical information across a feature
- change in chemical composition across the sample

Angle Resolved XPS
Similar to LAXPS. Sample tilted during analysis. This gives elemental and chemical information of thin films, coatings or contamination.

XPS Depth profile
Measuring the elemental or chemical composition as a function of depth. This is a destructive process where after each set of measurements the sample is eroded by use of an inert Ar ion beam. (Some samples are prone to reduction - contact us to discuss your samples).

XPS - Imaging
Generation of elemental or chemical images of features of interest with spatial resolution down to 1 micron (80% - 20% definition)

The Next Step
To discuss your problems and explore the solutions, please contact one of our scientists.

We can offer the following services:
- Sample analysis
- Data interpretation
- Instrument

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Unit 11   Lexden Lodge Industrial Estate   Jarvis Brook, Crowborough   East Sussex   TN62NQ,U.K.
Tel. (+44) 1892 665 633   Fax (+44) 1892 665 648   email: SALES@VACSYS.CO.UK

CONTACT