

Rigaku - Paralab XRD Workshop in Portugal

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In September 2016, three workshops were held in Portugal. The first was held in Porto and from there two more in Coimbra and Lisbon. More than 150 people joined and discussed Rigaku's unique XRD solutions.



Presentation by Rui Soares, CEO at Paralab at Coimbra

In the workshops, Keisuke Saito, XRD marketing manager at Rigaku Europe, gave presentations and live instrument demonstrations on the MiniFlex600 benchtop diffractometer.

The workshop program covered the following:

1. Powder X-ray diffraction solutions "Towards better resolution"
Discussed Rigaku unique solutions for powder XRD, e.g. Johansson $K\alpha_1$ monochromator on a $\theta-\theta$ goniometer, CALSA analyzer, DSC (differential scanning calorimetry) combined with XRD, and the newly developed CBO- α optic based on flat mirror technology.

2. Add-on 2-D SAXS and WAXS option for general purpose powder XRD:
Discussed newly announced 2-D SAXS/WAXS attachment for the SmartLab. A 3-D preferred orientation analysis on a polymer sample using both 2-D SAXS and WAXS was presented, together with its unique sample holders for liquid, fiber and plate forms of the sample.
3. Measure depth profiling by XRD on ultra-thin films using a unique 5-axes goniometer:
In-plane X-ray diffraction is a unique and powerful tool to characterize thin film samples. The incident angle of the X-rays is kept very shallow while rotating the detector parallel to the sample surface. By changing the incident angle, it becomes possible to change the penetration depth of the X-rays. Eventually, depth profiling of the X-ray diffraction experiment can be conducted.
4. MiniFlex600 demonstration:
The MiniFlex600 is a benchtop X-ray diffractometer with a compact design that fits in a station wagon. Taking advantage of this, we drove it to the three cities and provided on-site demonstrations. Samples brought by the participants were measured and analyzed. Besides the conventional phase identification and quantification, crystallite size and distribution, amorphous quantification, lattice constant refinement and Rietveld structure analysis were demonstrated using Rigaku's PDXL powder X-ray diffraction analysis software package.



Presentation on X-ray solutions



Demonstration of MiniFlex600

We would like to thank all of the participants for joining us, and Paralab for organizing the workshops. We hope to see you soon again!