



Joint MISiS, Rigaku, and E-Globaledge seminar in Moscow

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A joint seminar called “*Modern method of material structure analysis and its application for Materials Science*”, organized by the Institute of Steel and Alloy (MISiS), Rigaku, and E-Globaledge, was held on November 28 and 29, 2016. The event took place at MISiS.

MISiS is part of The National University of Science and Technology of Russia, located in the Center of Moscow, producing scientists in fields of research and industry related to steel and alloy.

In 2008, Hikaru Shimura, the President of Rigaku, reached an agreement with Rector Dmitry Livanov of MISiS (later appointed as Minister of Education and Science of the Russian Federation from 2012 – 2016) to donate a Rigaku Ultima IV X-ray diffraction system to MISiS, for use in their scientific and educational investigations, with the expectation of further joint R&D activities.

In 2009, the Ultima IV system was installed at the MISiS Competence Center in the X-ray diffraction laboratory, followed by the MISiS purchase of a Rigaku SmartLab® XRD system (9 kW), a Rigaku ZSX Primus II WDXRF spectrometer, and a Rigaku MiniFlex XRD spectrometer in 2010, under the Development of Education program of the Russian Federation.

Every autumn E-Globaledge Corporation holds a joint seminar with MISiS, inviting scientists from various universities and institutes in Russia to host presentations and introduce new publications of studies in the field of XRD, with Rigaku specialists in attendance.

This is the 6th joint seminar with MISiS. Professor Hideo Toraya and Dr. Keisuke Saito from Rigaku conducted the seminar, with 41 participants and guests from Russia and Belorussia.

In the past, the participants and guests would offer presentations of their academic articles, but this year the emphasis was shifted to more practical “master class’es’ for the laboratory personnel, wherein Rigaku instruments were activated in the laboratory and used to analyze the customers’ samples and to coach them in various analysis methods.

On the morning of November 28th, after Professor Aleksander Savchenko’s opening speech in the small hall at MISiS, Professor Toraya presented his new thesis “*New Quantitative Analysis*,” published this year. Dr. Saito of Rigaku Europe SE then made a presentation about Rigaku PDXL Software and the SmartLab system with the HyPix-3000 Hybrid Pixel Array Detector for 2D applications. Following Dr. Saito’s presentation, the sales manager from E-Globaledge made a presentation about the Rigaku SmartSite RS, including photos taken during a demonstration of steel pipe makers at a customer’s site in Russia.

After lunch, participants moved to the MISiS Laboratory for the Master Class “*SmartLab with PILATUS for 2D Powder Applications*.” With the help of Dr. Saito and the staff of E-Globaledge, samples brought by prospective customers were measured and analyzed using the SmartLab

diffractometer (9 kW).

The following morning, a scholarship from E-Globaledge was awarded to the high-achieving students of MISiS, after which two reports from Russian scientists were presented. (*“Reciprocal Space Mapping by X-ray Diffraction Method”* by Dr. K.Shcherbachev of MISiS and *“The Method of General Pole Figures as Unique Way to Reveal Unknown Regularities of Structure Formation in Metal Materials by Deformation and Heat Treatment”* by Dr.Yu.A.Perlovich, MEPhI).



After these scientific reports, three presentations of XRF products were made by E-Globaledge. (*“Features of Analysis of Light Elements and Elements with Low Concentration with Primus II WDXRF Spectrometer,” “Sample Preparation Techniques for Accurate XRF Analysis”* and *“TXRF Spectrometer Nanohunter II”*).

In the afternoon, the Master Class *“SmartLab with PILATUS for 2D Powder Application”* was held by Dr.Saito, using the SmartLab of MISiS for customers in the field of thin film analysis.



Concurrent with the Master Class for XRD, the engineers from E-Globaledge held a small seminar in the other MISiS laboratory, teaching a method of XRF analysis using the ZSX Primus II spectrometer, including sample preparation procedures, to young engineers working in industrial fields.

During the scientific presentation time on both of days, many questionnaires and discussions were held among the attendants under the adroit moderation of Professor Savchenko. The report from Professor Toraya on the future possibility of analysis on the amorphous materials was enthusiastically received by the participants.

In the past two years, Russia has experienced significant economic depression, and business environment was difficult due to the sharp fall of the Ruble against foreign currencies.

This year we specially emphasized Master Classes, which gives opportunities to potential customers to become familiar with the Rigaku instruments in practice. We hope that this seminar will help us further the sales of Rigaku instruments, as well as encourage further joint development of science in Russia and other CIS Countries.

Finally, we would like to express our great thanks to Professor Savchenko of MISiS, who kindly arranged the 6th annual Japanese–Russian seminar at MISiS, and to Professor Toraya and Dr.Saito, who came to Moscow all the way from Japan and Germany, for this annual seminar at MISiS.