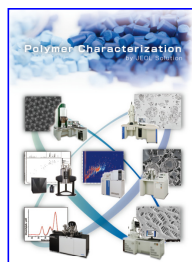


20th Polymer Analysis & Characterization 2015

Polymer Analysis & Characterization 2015, an annual conference for polymer analysis, was held on October 27 to 28 at the Tsukuba International Congress Center in Ibaraki prefecture. In the conference, a wide range of topics was discussed, including compositional analysis, molecular and higher-order structural characterization, correlation with structures and physical properties, expression of physical functions, analysis of polymerization mechanism, etc. This conference had keynote lectures, technical presentations from sponsors, and short presentations for each poster. JEOL has a strong relationship with this conference, because our customers of MS and NMR have played important roles in the conference.

From the annual conference in 2014, Polymer team, one of the YOKOGUSHI working group, started the activity and participated in the conference. At the 20th anniversary conference, about 10% of the posters were given from JEOL. The poster presentations from JEOL groups are shown as follows.



We made flyers including the titles of the poster presentations from JEOL and information on the technical review. We introduced the SuperCOOL Probe and the UltraCOOL Probe in the technical review.

The flyers were distributed not only in the conference but also in the JASIS*.

*JASIS: One of the largest exposition in Asia for analytical and scientific instruments. It's similar to the PITTCON.

【Poster presentations from JEOL】

Tuesday, October, 27th, 2015

I-10

Evolved gas analysis of Polymer by using GC/HRTOFMS

K. Okuda*, A. Kusai, Y. Yahata (JEOL Ltd.)

I-12

Imaging analysis using SERS and SALDI for an additive on a synthetic polymer

Takaya Satoh^{1*}, Hironobu Niimi Hironobu¹, Naoki Kikuchi¹, Makiko Fujii², Toshio Seki², Jiro Matsuo² (1 JEOL Ltd., 2 Kyoto Univ.)

II-01

Structural characterization of high molecular-weight polyesters by on-plate degradation with high mass-resolution MALDI spiral-TOFMS

H. Sato^{1*}, K. Teramoto², K. Nakamura¹

(1. National Institute of Advanced Industrial Science and Technology, ² JEOL Ltd.)

III-02

Rapid analysis of additives in oil by using GC/MS with photoionization

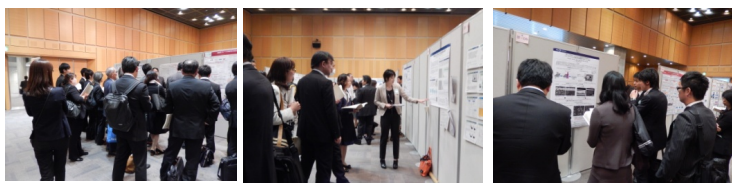
M. Hashimoto*, T. Higuchi, K. Okuda, A. Kusai, Y. Yahata (JEOL Ltd.)

III-15

Analysis of liquid samples by DART-TOFMS using leidenfrost effect

K. Oka^{1*}, A. Kusai¹, C. Takei², H. Shimada³, Y. Shida⁴, K. Hiraoka⁴

(1. JEOL Ltd., 2. BioChromato, Inc., 3. Shiseido Research Center, 4. University of Yamanashi)



Photographs of the poster session.

Wednesday, October, 28th, 2015

III-16

Application to the Particle analysis of Cryo- extraction replica method with the electron microscope

C. Nakayama*, S. Nakanoda, H. Nishioka (JEOL Ltd)

III-21

Evaluation of radical detection in superengineering plastic under high temperature.

Y. Nakai*, Y. Mizuta (JEOL RESONANCE)

IV-06

A novel specimen preparation method and FE-SEM analysis of soft materials using Ar ion beam apparatus equipped with a cooling stage

Yusuke Sakuda*, Yuhei Nakajima, Shunsuke Asahina, Naoki Kikuchi, Takeshi Nokuo (JEOL Ltd.)

Our Collaborators



Ceremonial photograph.



JMS-S3000 and JNM-ECX40.

Dr. Hiroaki Sato (shown at right in the photo) is one of a representative researchers in the field of the polymer analysis in Japan. He works at National Institute of Advanced Industrial Science and Technology (AIST) in Tsukuba, and he continues proposing new applications for polymer analysis using SpiralTOF (JMS-S3000). We received the Best Paper Award from Japan Mass Spectrometry Society**. In the study, JMS-S3000 and JNM-ECX40 were used.

** H. Sato *et al.*, Application of High-Resolution MALDI-TOFMS with a Spiral Ion Trajectory for the Structural Characterization of Free Radical Polymerized Methacrylate Ester Copolymers, *Mass Spectrom.*, **2**, A0014 (2013).
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3775818/> [Open Access!!]

Last October, Dr. H. Sato got a powerful new face, Dr. Thierry Fouquet from France as a JSPS fellow. Dr. H. Sato and Dr. T. Fouquet came to Akishima office for Lab tour. Application chemists actively explained their equipments and applications.



Photographs of Lab tour.

Recent achievement T. Fouquet *et al.*, MALDI SpiralTOF high-resolution mass spectrometry and Kendrick mass defect analysis applied to characterization of poly(ethylene-co-vinyl acetate) copolymers, *Rapid Commun. Mass Spectrom.*, **30**, 973-981 (2016).

<http://onlinelibrary.wiley.com/doi/10.1002/rcm.7525/full> [Open Access!!]

YOKOGUSHI Polymer team

We would like to express my appreciation to Dr. H. Sato, Dr. T. Fouquet, and application chemists for their cooperation.

YOKOGUSHI Polymer-team has nine application chemists with different specialties as follows: H. Nishioka (TEM, adviser), T. Kaneko (SEM), Y. Shimoikeda (NMR), C. Nakayama (TEM), M. Shima (XPS), K. Okuda (MS), Y. Sakuda (SEM), and K. Teramoto (MS, reader).