

# Meeting on X-Ray Fundamental Parameters for Reference-Free Analysis (at Tsukuba)

## Friday, September 20, 2013

9:00-9:10	Introductory talk on reference free X-ray analysis and fundamental parameters	Kenji Sakurai (NIMS)
9:10-10:05	Fundamental parameter methods - Historical perspectives and an outlook to the future	Michael Mantler (Rigaku)
10:05-10:25	On chemical shift using anti-parallel x-ray spectrometer	Yoshiaki Ito (Kyoto Univ)
10:25-10:40	Coffee Break	
10:40-11:35	Determination of X-ray fundamental parameters using calibrated instrumentation and well-known synchrotron radiation	Burkhard Beckhoff (PTB)
11:35-11:55	Cross sections of double core-hole creation and two-photon absorption by x-ray free-electron laser	Kenji Tamasaku (Riken)
11:55-13:00	Lunch Break	
13:00-13:20	Quantitative analysis of hazardous elements in plastics by X-ray fluorescence spectrometry with fundamental parameter or calibration methods	Masaki Ohata (AIST)
13:20-13:40	Applications of fundamental parameter method to industrial use	Yoshiyuki Kataoka (Rigaku)
13:40-14:00	Relativistic K and L shells fluorescence yield values for Ge	José Paulo Santos (Univ Nova de Lisboa)
14:00-14:20	Synchrotron X-ray fluorescence analysis at Photon Factory (tentative)	Atsuo Iida (Photon Factory)
14:20-14:35	Coffee Break	
14:35-14:55	Theoretical calculation of X-ray fluorescence spectra of 3d transition metal compounds	H. Iwasaki (Kyoto Univ)
14:55-15:20	Measurement of fundamental parameter in LHNB - The example of germanium	Marie-Christine Lépy (CEA Saclay)
15:20-17:00	Posters	
1	Application of STJ array detector to XAFS analysis in soft X-ray region	Shigetomo Shiki (AIST)
2	Quantitative analysis of elements using x-ray absorption edge jump	Nobuyuki Matsubayashi (AIST)
3	X-ray source using coniferous carbon nano structure	Hidetoshi Kato (AIST)
4	X-ray fluorescence analysis of ions implanted in Si wafer (tentative)	Hirata (AIST)
5	X-ray fluorescence analysis of natural sea shell (tentative)	Vallerie Samson (NIMS)
6	Achievements and problems in reference free analytical application using X-ray fundamental parameters (tentative)	Shimadzu
7	Achievements and problems in reference free analytical application using X-ray fundamental parameters (tentative)	Rigaku
8	Achievements and problems in reference free analytical application using X-ray fundamental parameters (tentative)	JEOL

	Achievements and problems in reference free 9 analytical application using X-ray fundamental parameters (tentative)	Hitachi Hitech
	Achievements and problems in reference free 10 analytical application using X-ray fundamental parameters (tentative)	Horiba
	Achievements and problems in reference free 11 analytical application using X-ray fundamental parameters (tentative)	Bruker
	12 Problems in JIS standard on XRF analysis	Jun Kawai (Kyoto Univ)
	13 Standardization of TXRF (tentative)	Laura Depero (Brescia Univ)
	Study of trace iron concentrations in biological 14 samples by total reflection X-ray fluorescence spectrometry	Nikita Kulesh (Ural Federal Univ)
	15 Current status of European FP initiative (tentative)	Burkhard Beckhoff (PTB)
16	High-precision physical vapor deposition layers for (re)determination of X-ray fundamental parameters	Markus Krämer (AXO Dresden GmbH)
17:00-17:45	Discussion	Kenji Sakurai (NIMS)
17:45	Closing	
18:00-19:30	Party	

## Saturday, September 21, 2013

Morning

### **Short visit to Photon Factory (meeting point Tsukuba Station)**

- 0845 Meeting at Tsukuba railway station (ground level)
- 0855 Taking a bus departing from Tsukuba railway station
- 0913 Arriving at KEK bus stop
- 0930 Tour of the Photon Factory
- 1020 Leaving the Photon Factory
- 1045 Taking a bus bound for Tsukuba railway station
- 1108 Arriving at Tsukuba railway station