

# The 9th TOYOTA RIKEN International Workshop on New Developments and Prospects for the Future of Mössbauer Spectroscopy (IWMS2018)

Toyota Commemorative Museum of Industry and Technology in Nagoya, Japan

15 -17 November 2018

## Program (revised on 2018/6/26)

### 15 Nov. (Thu.)

- 9:30 – Registration
- 10:30 – 10:45 Opening remarks
- 10:45 – 11:30 (I-1) Rudolf Rüffer (ESRF, Grenoble, France)  
“Historical developments and future perspective in nuclear resonance scattering experiments”
- 11:30 – 12:20 (O-1) Makoto Seto (Kyoto University, Japan)  
“Nuclear resonant scattering of synchrotron radiation applied to the studies of electronic and dynamics states of matter”
- (O-2) Ryo Masuda (Kyoto University, Japan)  
“<sup>61</sup>Ni Synchrotron-radiation-based Mössbauer absorption spectroscopy of complex nanoparticles”
- 12:20 – 13:35 <Lunch time>
- 13:35 – 14:20 (I-2) Ralf Röhlsberger (DESY Hamburg, Germany)  
“Quantum optical phenomena in nuclear resonant scattering”
- 14:20 – 15:05 (I-3) Ilya Sergeev (DESY Hamburg, Germany)  
“Nuclear resonance scattering at DESY: current status and future trends”
- 15:05 – 15:20 <Coffee break>
- 15:20 – 16:05 (I-4) Michael Reissner (Institute of Solid State Physics, TU Wien, Austria)  
“Magnetism under high magnetic field”
- 16:05 – 16:45 (I-5) Naoki Maruyama (Nippon Steel & Sumitomo Metal Co., Japan)  
“Mössbauer and atom probe tomography characterization of low and medium carbon martensitic steels”
- 16:45 – 17:25 (O-3) Ko Mibu (Nagoya Institute of Technology, Japan)  
“Mössbauer spectroscopic studies on magnetic thin films”
- 17:25 – 17:50 (O-4) Takashi Segi (KOBELCO Research Institute, Inc., Japan)  
“Synchrotron radiation-based Ni-61 Mössbauer spectroscopic study of nickel-supported cathode materials of lithium ion rechargeable battery”
- 17:50 – 18:15 (O-5) Shugo Ikeda (University of Hyogo, Japan)  
“Coexistence of superconductivity and antiferromagnetic order in EuFe<sub>2</sub>As<sub>2</sub>”
- 18:30 – 20:30 Welcome party

## IWMS2018 Program (continued)

### 16 Nov. (Fri.)

- 8:30 – Registration
- 9:00 – 9:45 (I-6) Pierre-Emmanuel Lippens (Institut Charles Gerhardt, Montpellier, France)  
“Applications of Mössbauer spectroscopy for Li-ion and Na-ion batteries”
- 9:45 – 10:30 (I-7) Jun Sugiyama (Toyota Central Research & Development Lab., Inc., Japan)  
“Energy materials research by muon spin spectroscopy”
- 10:30 – 10:45 <Coffee break>
- 10:45 – 11:25 (I-8) Masashi Okubo (The University of Tokyo, Japan)  
“Mössbauer spectroscopy for assessment of battery electrodes”
- 11:25 – 11:50 (O-6) Fumito Fujishiro (Kochi University, Japan)  
“Relationship between chemical state of Fe and oxide ion vacancy content in perovskite-type  $\text{Ba}_{1-x}\text{Sr}_x\text{Fe}_{0.9}\text{In}_{0.1}\text{O}_{3-\delta}$  as mixed ionic-electronic conductor”
- 11:50 – 13:05 <Lunch time>
- 13:05 – 13:50 (I-9) Catherine McCammon (University of Bayreuth, Germany)  
“Mössbauer spectroscopy with high spatial resolution and spotlight on geoscience”
- 13:50 – 14:15 (O-7) Yoichi Nakajima (Kumamoto University, Japan)  
“Inelastic scattering measurements on iron alloys under high pressure: Applications for the nature of planetary cores”
- 14:15 – 14:55 (O-8) Yoshitaka Yoda (JASRI/SPring-8, Japan)  
“Present status and biological applications at BL09XU and BL19LXU, SPring-8”
- 14:55 – 15:25 (O-9) Satoshi Tsutsui (JASRI/SPring-8, Japan)  
“ $^{149}\text{Sm}$  Mössbauer spectroscopic study on valence fluctuation in Sm intermetallic compounds”
- 15:25 – 15:55 (O-10) Takaya Mitsui (QST/SPring-8, Japan)  
“Advanced Mössbauer spectroscopy with nuclear Bragg monochromator in SPring-8”
- 15:55 – 16:10 <Coffee break>
- 16:10 – 17:00 Poster presentation A (Odd number)
- 17:10 – 18:00 Poster presentation B (Even number)
- 18:30 – 20:30 Banquet

## IWMS2018 Program (continued)

### 17 Nov. (Sat.)

- 8:30 – Registration
- 9:00 – 9:45 (I-10) Volker Schünemann (University of Kaiserslautern, Germany)  
“From small to large molecules: Iron in chemical complexes and biological systems”
- 9:45 – 10:25 (O-11) Norimichi Kojima (Toyota Physical & Chemical Research Institute, Japan)  
“Progress of multifunctional phenomena coupled with spin, photon and charge based on iron mixed-valence system”
- 10:25 – 10:50 (O-12) Masayuki Nihei (University of Tsukuba, Japan)  
“Multi-nuclear cluster as a functional unit of bulk materials”
- 10:50 – 11:05 <Coffee break>
- 11:05 – 11:30 (O-13) Yasuhiro Ohki (Nagoya University, Japan)  
“Iron-based hydride clusters: Synthesis, characterization, and application in the catalytic N<sub>2</sub> silylation”
- 11:30 – 11:55 (O-14) Takehiro Ohta (University of Hyogo, Japan)  
“Structural basis and dynamics for gas recognition of myoglobin: A nuclear resonance vibrational spectroscopic study”
- 11:55 – 13:10 <Lunch time>
- 13:10 – 13:40 (O-15) Makina Saito (Kyoto University, Japan)  
”Quasi-elastic scattering experiment using multi-line gamma-ray time-domain interferometry and its various application”
- 13:40 – 14:20 (O-16) Yutaka Yoshida (Shizuoka Institute of Science and Technology, Japan)  
“Mössbauer spectroscopic microscope studies on diffusion in solids”
- 14:20 – 14:40 Closing remarks/Discussion
- 14:40 – 15:00 <Coffee break>
- 15:00 – 17:00 Excursion (Museum Tour)