Report on The 2nd International Seminar,

Frontier of Energy Flow Dynamics in
Atomistic and Electronic Scales

December 1st, 2009
Aoba Memorial Hall, Tohoku University

The 2nd international seminar, entitled "*Frontier of Energy Flow Dynamics in Atomistic and Electronic Scales* (FEFDAES-2)", was held at Aoba Memorial Hall, Aobayama Campus, Tohoku University on December 1st. The seminar was supported by the Global COE program "*World Center of Education and Research for Trans-disciplinary Flow Dynamics*" from Institute of Fluid Science, Tohoku University, Japan. FEFDAES-2 focused on the energy flow relating display, semiconductor, biology and tribology at atomistic and electronic scales. We had some invited lectures from the Japanese and foreign doctoral course students who are very active in the concerned fields. All the participants extensively discussed the future vision of the energy flow dynamics through the invited lectures, and the participants interacted among different field. Totally, 29 students participate consisting undergraduate, master, doctoral course students, and six invited speakers. Additionally, 15 students from abroad attended, who were from Korea, China, Philippines, USA, France, Sweden, India, and Bangladesh.

PICTURE 1: FEFDAES-2 venue: Aoba Memorial Hall, Tohoku University.

FEFDAES-2 had started with the opening remarks from the chair: Mr. Sunho Jung. Then the chair: Mr. Hiroaki Onuma presented the objective and direction of the Global COE program. We had three invited lectures before noon. Firstly, Mr. Bart Trzynadlowski from University of Washington, USA presented concept and an application of multi-scale simulation. Next, Mr. Sung

Wook Kim from Korea Advanced Institute of Science and Technology explained the frontier technology of the organic light emitting materials. Finally, Mr. Ryo Kunimoto from Kyoto University talked about the frontier technology of bioinformatics. After the talks, the luncheon party was held at 3rd floor "SHIKISAI".


PICTURE 2: Invited talk by Mr. Bart Trzynadlowski, and Mr. Sung Wook Kim, and Mr. Ryo Kunimoto.

After the lunch, Mr. Haruki Koda presented the user interfaces providing the powerful technologies for touch panels. Next, we had short oral and poster presentations by 18 participants (including undergraduate, master course and doctoral course students). It is worthy to mention that Mr. Atsunori Ono from Akita University presented a chemical reaction process of the automotive exhaust catalysts during both sessions. Finally, we had remaining two invited talks by Ms. Paule Njiwa, from Ecole Centrale de Lyon, France and Mr. Sung Wook Kim. Ms. Njiwa explained the recent technology of tribochemistry for the engine oil additives, and Mr. Sung Wook Kim presented a current technology of the phosphor materials (alternative talk of Mr. Hyoung Sun Yoo). During the lectures and poster session, all the participants had done active discussions. Remarkably, the questions from the undergraduate and master course students were significant as well as doctoral course students.
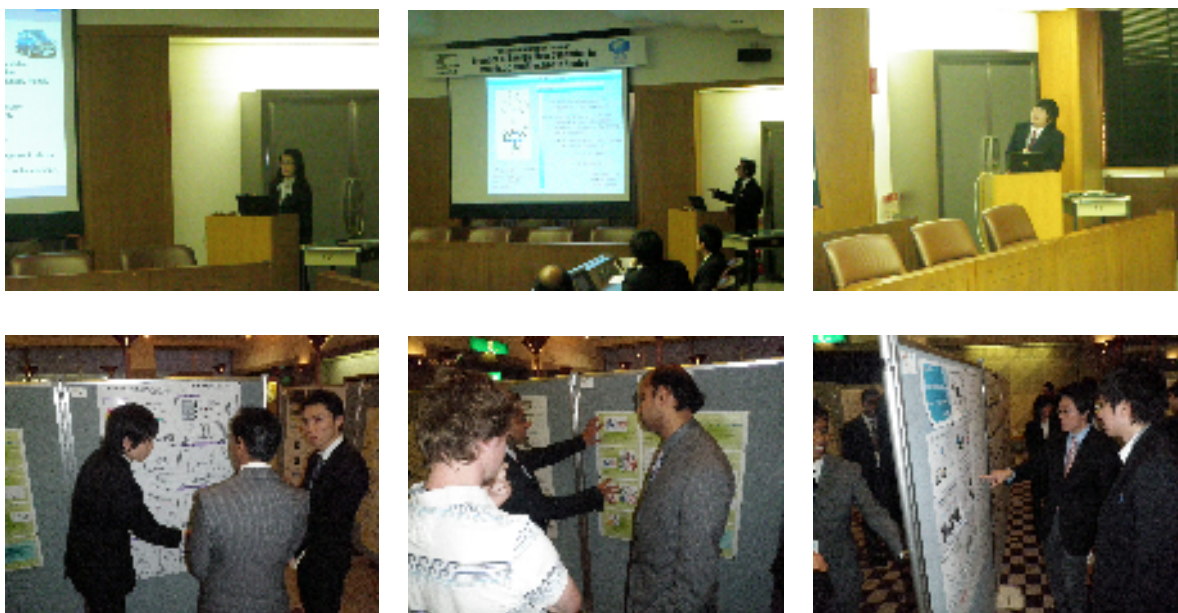

PICTURE 3-1: Invited talk by Mr. Haruki Koda, and Ms. Paule Njiwa.
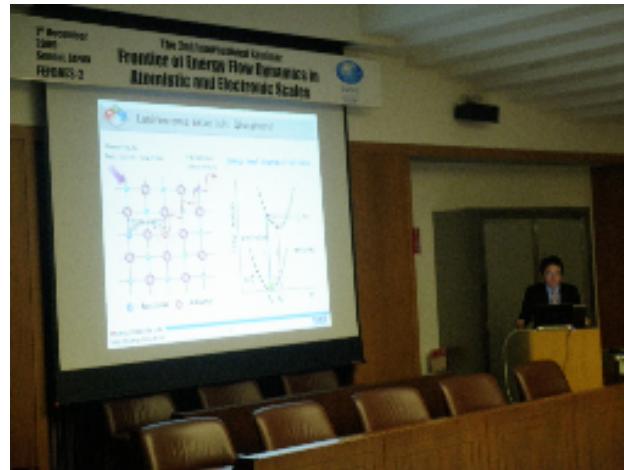
PICTURE 3-2: Invited talk by Mr. Sung Wook Kim.
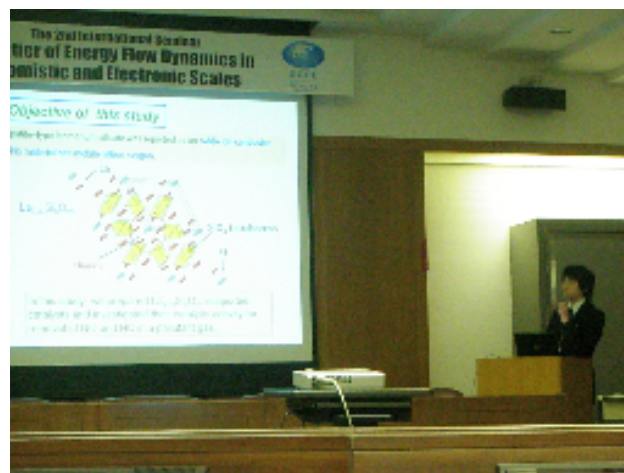
PICTURE 4: Short oral resentation by Mr. Atsunori Ono.

PICTURE 5: Short oral and poster presentations.

PICTURE 6: Discussions.

At the end of the day, FEFDAES-2 had been successfully finished with the closing remarks by the chair: Mr. Tasuku Onodera. After that, we had a time for banquet. Active discussion and cultural exchange with no restrictions of the grade of the students could be seen in the banquet. This seminar could provide the frontier knowledge about the energy flow in atomistic and electronic scale to all participants. Finally, the organizers think that this was a good opportunity for all the participants to discuss the topics in different research fields.

PICTURE 7: Banquet (SHIKISAI, Aoba Memorial Hall, Tohoku University).

PICTURE 8: Group photograph.