KINKEN-WAKATE 2013 -10th Materials Science School for Young Scientists-

KINKEN-WAKATE 2013 was held on November 21st-22nd, 2013, at TRUST CITY CONFERENCE, SENDAI. The aim of KINKEN-WAKATE 2013 was to provide comprehensive lectures of crystal growth and to promote exchange of ideas and collaborations among young scientists. Participants deepened understanding of crystal growth through lectures by four leading researchers and actively discussed each other through poster presentations by young scientists.

KINKEN-WAKATE 2013 was comprised of the lecture session and the poster session. The program began with the greetings of Prof. Niinomi who was the director of IMR on the morning on Nov. 21st (Fig. 1). Subsequently, the lecture session was carried out as follows.

Nov. 21st
Lecture 1: Epitaxial growth (1)
Lecture 2: Epitaxial growth (2)
by Prof. Tatau Nishinaga (Professor emeritus at the University of Tokyo).

Lecture 3: Bulk crystal growth (1)
Lecture 4: Bulk crystal growth (2)
by Prof. Peter Rudolph (Crystal Technology Consulting (CTC)).

We learned fundamentals of 2D nucleation, surface morphology, surface diffusion, etc., and technologies of thin film growth, such as MBE, MOCVD, and Micro-channel epitaxy(MCE), in Lectures 1 and 2. Thermodynamics, kinetics, and transports of heat and mass during melt growth processes were lectured in Lecture 3, and growth technologies of variety of bulk crystals were explained in Lecture 4.

Nov. 22nd
Lecture 5: Fundamental crystal growth mechanisms
Lecture 6: Surface melting: hot low-temperature science
by Prof. Gen Sazaki (Hokkaido University).

Lecture 7: Defect Engineering (1)
Lecture 8: Defect Engineering (2)
by Prof. Thomas Kuech (University of Wisconsin-Madison).

We could understand step growth mechanisms on a protein crystal surface and also understood the formation of quasi-liquid layers on an ice crystal surface in Lectures 5 and 6. Thermodynamics, electrical properties, and engineering of point defects were explained in detail in Lectures 7 and 8.

Through those 8 splendid lectures, our understanding for crystal growth deepened.

In the poster session, young scientists gave 3 min oral short presentations in English (Fig. 2) and poster presentations.

KINKEN-WAKATE 2013 finished a success with a convivial party on the evening on 22nd.

Fig. 1 The four lecturers were introduced in the opening talk by Prof. Niinomi.

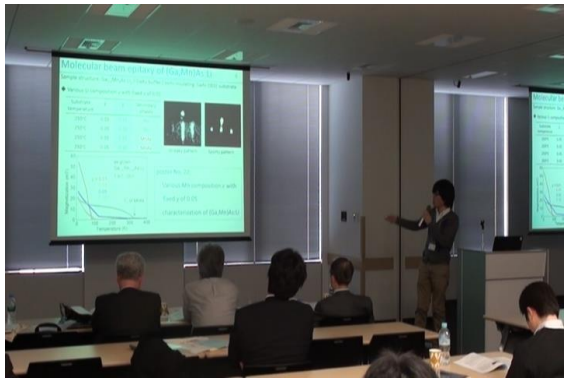

Fig. 2 Short presentations by young scientists

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