The 14th International Summer School on Crystal Growth

The 14th International Summer School on Crystal Growth (ISSCG-14) will be held on August 1st-7th, 2010 at Dalian, China. ISSCG-14, as usual, aims to provide comprehensive lectures in different areas of crystallization. Lectures by leading researchers will encompass the fundamentals and recent improvements on crystal growth. A textbook based on the lectures will be published in American Institute of Physics (AIP) conference proceedings before the School is started, and will be provided to attendees without additional charge.

The level of the school is intended for post-graduate and post-doctoral students as well as fresh researchers all over the world. Researchers new to crystal growth as well as experts are encouraged to attend.

The format of the School is designed to encourage interaction between lectures and attendees. Informal discussion of student research through posters is planned during extended coffee breaks. In additional, several social activities will provide opportunities for discussions.

Topics and lecturers of the school:

Georg Muller	Crystal Growth Laboratory, Department of Materials Science, University Erlangen-Nuernberg, Fraunhofer Institute, Germany	Optimization and modeling of photovoltaic silicon processes
A. A. Chernov	Lawrence Livermore National Laboratory, CA94551, USA	Surface phenomena and parameters of crystal growth
Peter Rudolph	Coordinator Technology Developments Leibniz Institute for Crystal Growth, Germany	Transport phenomena of crystal growth (heat and mass transfer)
Jeffrey J. Derby	Department of Chemical Engineering & Materials Science and Engineering, University of Minnesota, USA	Modeling and bulk crystal growth processes: What is to be learned?
Koichi Kakimoto	Research Institute for Applied Mechanics, Kyushu University, Japan	Crystal growth of semiconductor bulk crystals
J. W. Evans	Department of Mathematics and Ames Laboratory-USDOE, Iowa State University, USA	Epitaxial growth of metal films on single-element and alloy substrates: experimental STM studies and atomistic or coarse-grained modeling

Peter G. Vekilov	Department of Chemical and Biomolecular Engineering, and Department of Chemistry, University of Houston, USA	Nucleation of crystals in solution
Thomas F. Kuech	Department of Chemical and Biological Engineering, University of Wisconsin-Madison, USA	Metal Organic Vapor Phase Epitaxy and Thin Film Crystal Growth (tentative)
Elias Vlieg	IMM Solid State Chemistry, Radboud University, Netherlands	To be determined
Katsuo Tsukamoto	Graduate School of Science, Tohoku University, Japan	Optical In-Situ Observation of Crystal Growth Process
James J. De Yoreo	Chemistry, Materials and Life Science Directorate, Lawrence Livermore National Laboratory, USA	Biomolecular controls on crystal nucleation and growth
Xiang Yang Liu	Department of Physics, Faculty of Science, National University of Singapore, Singapore	Simulating "Atomic" Processes of Crystallization via Controlled Colloidal Assembly
Mu Wang	National Laboratory of Solid State Microstructures and Department of physics, Nanjing University, China	Self-organization in nanocrystallization
Mathis Plapp	Chargè de recherches au CNRS Maitre de confé à l'Ecole Polytechnique, France	Application of phase-field method in crystal growth
Dongfeng Xue	Department of Materials Science and Chemical Engineering, School of Chemical Engineering, Dalian University of Technology, China	Observation and simulation of crystallization behaviors of inorganic materials (tentative)
Jiyang Wang	State Key Laboratory of Crystal Materials, Shandong University, China	to be determined
Hiroki Nada	National Institute of Advanced Industrial Science and Technology, Japan	Molecular Dynamics Study on Ice Crystallization (tentative)
Makio Uwaha	Department of Physics, Nagoya University, Japan	Theoretical models for the chirality conversion of crystals with grinding
Cristobal Viedma	Departamento de Cristalografia y Mineralogia,Facultad de Ciencias Geologicas,Universidad Complutense, Spain	Chirality Change by Grinding Crystals in Solution

Max G. Lagally	Department of Materials Science and Engineering, University of Wisconsin-Madison, USA	Nanoepitaxy in the presence of lattice strain: Quantum dots and strain engineering of nanomembranes in the silicon model system
Yoshinori Furukawa	Institute of Low Temperature Science, Hokkaido University, Japan	Pattern formation of snow and ice crystals

Experimental Practices Course

One of the new trials during this school is to bring together some fundamental and interesting experiments, which will be conducted by the students with the help of leader scientists, see table below. Each group of student is requested to report their experimental results during the school. Several topics are related to the lectures and these lectures would directly help students to practice experiments and summarize the report. Good presents will be awarded to the good presentations.

Each group consists of about ten students and thus during registration, they need to select three topics from the list. They will take three different experiments but need to choose only one for the report by Power Point Presentation.

Similar experimental practice has been successfully performed in Sendai, Japan, during the Crystal Growth School (Houdankai) in 2008 and 2009. Such type of practice is not merely a demonstration of experiments. Rather, students themselves should be actively involved and contribute to the experiments. During the practice courses, direct and frank discussions between the students and lecturers are encouraged. Engineers from companies supporting this course will also contribute to the practice on site.

List of experiments

- Chiral Crystallization
- In situ surface observation
- Nucleation of a melt droplet during levitation
- Measurement of growth rate by interferometer
- Phase-field computer simulation (texture of crystals)
- Monte Carlo simulation of crystal growth
- AFM studies during crystal growth in solution
- Colloidal crystallization

Location and Accommodation

A block of rooms for school attendees has been reserved for six nights beginning from Sunday August 1st, 2010 through August 7th, 2010. Housing and meals are included in the registration fees. For those who want to extend their stay after school please contact the front desk to see the availability of the rooms while checking in.

Dalian locates at the southern tip of Liaodong peninsular in northeast China, with the Yellow Sea on the east, Bohai Sea on the west. Dalian lies in the warm temperate zone of the north hemisphere, with maritime feature of warm temperate continental monsoon climate. The temperature of August varies from 30°C (86 F) to 20 °C (68 F). Humidity is above 70%.

Posters

Poster session will be held during extended coffee breaks. Posters provide an informal forum for discussion of latest research results with experts and colleagues. Students and post-doctors are required to submit posters. And poster presentation is a requirement for financial support.

The final deadline for submitting an abstract for poster presentation is June 1, 2010.

Submit your poster abstract by email to: Wenjun Zhang (zhangwj@nju.edu.cn).

For detail information about poster, please visit http://www.isscg14.org.cn/index.php/call-for-posters.

Important Deadlines

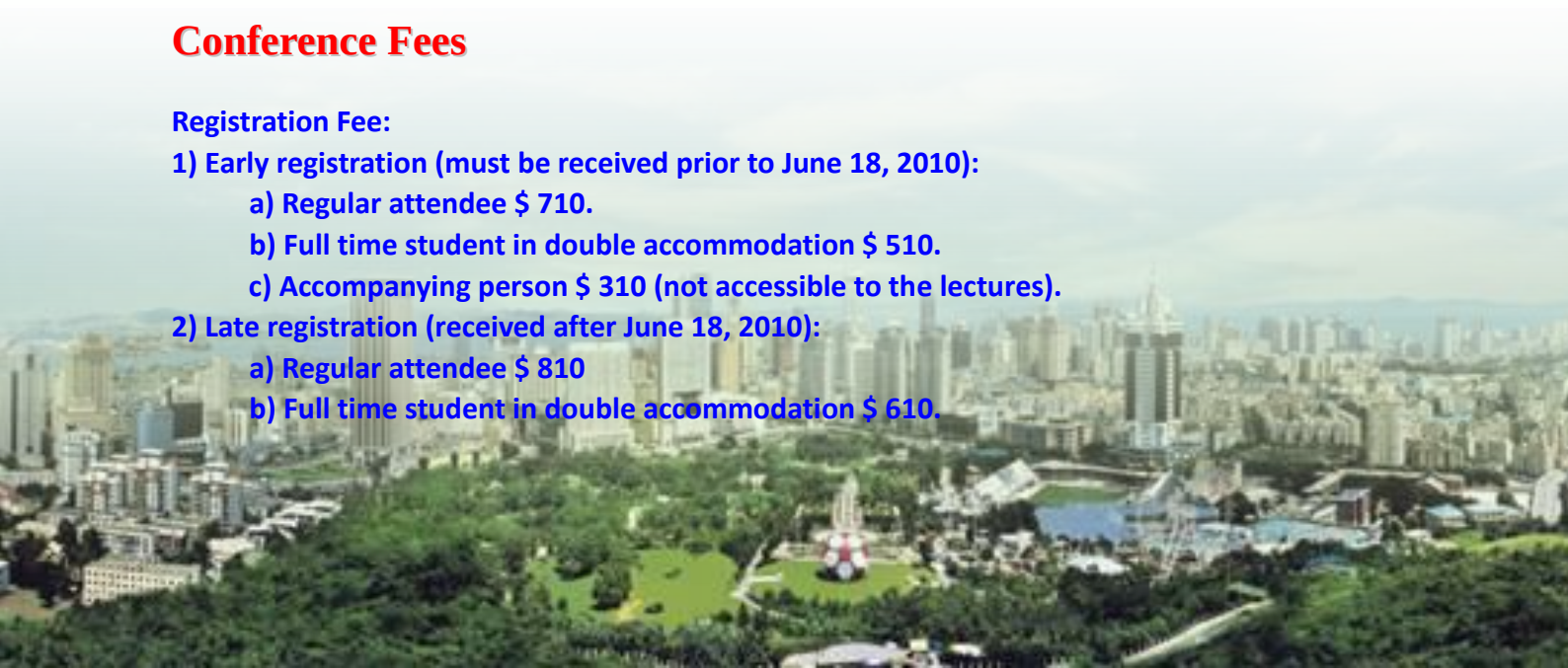
Early registration: Before June 18, 2010
Regular registration: After June 18, 2010
Deadline for applying financial support: May 15, 2010
Deadline for submitting an abstract of poster: June 1, 2010

Registration

Participants are kindly requested to visit the website of the summer school regarding registration and other information at http://www.isscg14.org.cn/.

Conference Fees

Registration Fee:
1) Early registration (must be received prior to June 18, 2010):
   a) Regular attendee $ 710.
   b) Full time student in double accommodation $ 510.
   c) Accompanying person $ 310 (not accessible to the lectures).
2) Late registration (received after June 18, 2010):
   a) Regular attendee $ 810
   b) Full time student in double accommodation $ 610.



c) Accompanying person $ 410 (not accessible to the lectures).

3) Bus transportation from Dalian to Beijing is arranged. The ticket costs USD $30/person, and should be paid in the time of registration.

Visa

For those need Visas for travel to China, please contact the School Secretary Prof. Di Wu at dwu@nju.edu.cn, who can provide a letter of invitation. It is the responsibility of each attendee to allow enough time to obtain the necessary visa from their local China consulate if one is required.

Financial Assistance

A limited amount of financial assistance is available to full-time students and post-doctoral fellows. Individuals requesting financial aid should submit a request and include the following information: name, affiliation, form of assistance requested, amount (US$) of assistance requested, reason for requesting assistance, abstract of poster presentation, and whether you are attending ICCG-16. Requests must be made prior to May 15, 2010. Recipients of financial aid awards will be notified by June 15, 2010. All requests for assistance should be e-mailed to zhangwj@nju.edu.cn

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