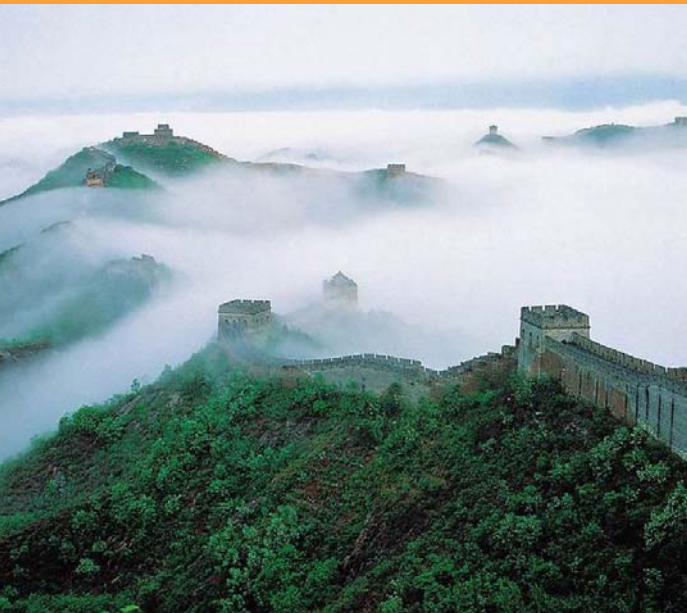


**16th International Conference on
Crystal Growth
14th International Conference on
Vapor Growth and Epitaxy**

**Organized by Chinese Association for Crystal Growth
on Behalf of International Organization for Crystal Growth**



**Beijing International Convention Center
Beijing, People's Republic of China
August 8 -13, 2010**



**Join us for the world's foremost
international conference and
exhibitions for crystal growth
technologies, researchers and
manufacturers.**

Sponsored by

**Chinese Academy of Sciences
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SCOPE OF ICCG-16/ICVGE-14 (AUGUST 08-13, 2010)

The 16th International Conference on Crystal Growth (ICCG-16) will be held together with the 14th International Conference on Vapor Growth and Epitaxy (ICVGE-14) in Beijing, China. The conference site is Beijing International Convention Center in walking distance to the Beijing National Stadium (Bird Nest) built for the 29th Summer Olympics. This conference will provide an ideal forum for the presentations and discussions of recent developments and achievements in all respects of crystal growth with various sessions integrating fundamental, experimental and industrial growth processes, characterization and applications. It helps to stimulate the review of historical theory and the practice to test new ideas in informal social activities. The current worldwide society has a great demand to photovoltaic based renewable energy. One of the key elements in photovoltaic industry is the growth of materials using improved or newly developed crystal growth technologies through understanding new phenomena arising from the needs for the growth of cost effective and high quality materials. To seek a sustainable, energy saving and/or cooperative society we strongly feel it is our responsibility to promote the international crystal growth society through playing the vital role in the development of new crystal growth technologies. The conference includes both oral and poster sessions, as well as plenary and invited talks to provide broad visions of developments in different fields. The official language will be English.

CALL FOR ABSTRACTS In addition to invited papers, contributed papers, in English only, will be accepted on all aspects of crystal growth. They must contain new material not previously published. While authors may request a poster or an oral presentation, the program committee will set the program schedule based on conference requirements. You may submit your abstract by accessing the web-site <http://iccg16.tipc.cn/>.

Important dates:

ABSTRACT SUBMISSION ENDS – APRIL 15, 2010

Abstract Acceptance Notification – before **April 25, 2010**

Late News Poster Submissions - **May 1, 2010**

PUBLICATION OF PROCEEDINGS The proceedings of the ICCG-16 and ICVGE-14 will be published as a special issue of the Journal of Crystal Growth. All attendees are invited to submit an original manuscript on their work. The deadline for submission is July 1, 2010. Check the conference website for the details of the submission process.

PLENARY LECTURES

“Crystal growth of the KBBF family and Deep-UV harmonic generation” Chuangtian CHEN (China)

“Progress in crystal growth and epitaxy of solar cells” Eicke R. Weber (Germany)

“Nanopatterning in semiconductor growth and structure formation” Thomas F. Kuech (USA)

“In situ gravimetric monitoring of hydrogen etching rates of GaN, sapphire and SiC” Akinori KOUKITU (Japan)

“Engineering ferroelectric domain for nonlinear photonics, laser and quantum Optics” Shining ZHU (China)

TECHNICAL SESSIONS AND SESSION ORGANIZERS

Fundamental of Crystal Growth (Theory, Simulation, Modeling, Growth Mechanism, Surface and Interfaces):

Mu WANG; Peter Vekilov; Makio UWAHA.

Topic: This session will cover the fundamental aspects of crystal growth at all length scales. The topics will include recent developments on the study of nucleation process, instability of interfacial growth, chiral crystallization, the methodologies such as phase field theories and those that exploit the mesoscopic scale and serve to join phenomena on the atomic and macroscopic levels, etc..

Invited speakers: Marcel Rost, Elias Vlieg, Xiang-Yang LIU, Yukio SAITO, Yoshinori FURUKAWA, Max G. Lagally, Koichi KAKIMOTO, Hui ZHANG, Kristen Fichthorn, Juan Ma Garcia Ruiz, Kevin Roberts.

Growth of Crystalline Silicon and Photovoltaic Materials:

Hui ZHANG; Koichi KAKIMOTO; Deren YANG.
Topic: The rapid growth in photovoltaic markets has been the direct result of advances made in crystal growth technologies from crystalline silicon to thin-film materials to high-efficiency III-V multijunction solar cells for concentrators. This session will feature the latest progress in these technologies and research issues being addressed.

Invited speakers: Xiangyang MA, Yuepeng WAN, Bushan Sopori, Kozo FUJIWARA, Yoshi OHSHITA, Jochen Friedrich, Peter Rudolph, Thierry Duffar.

Narrow Gap and Compound Semiconductors:

Yonghai CHEN; Thierry Duffar; Hiroshi FUJIOKA;
Topic: This session will focus on the growth and applications of narrow gap and compound semiconductor materials in both bulk and liquid epitaxial form. It includes Si, Ge, antimonides, bismides, II-VI and III-V compound semiconductor materials, substrate materials and others.

Invited speakers: Junhao CHU, Yoshinao KUMAGAI, Ch. Frank-Rotsch, D. F. Bliss, J. Winkler.

Wide Band-Gap Semiconductors: Bulk and Epitaxial Growth:

Xiaolong CHEN; Dietmar Siche; Stanislaw Krukowski; Akinori KOUKITU.
Topic: This session will cover recent progresses on bulk and epitaxial growth of wide band-gap semiconductors including but not limited to III nitrides, SiC, ZnO, diamond, BN and etc. Submissions on the characterizations, processing, properties, device fabrications and applications are also encouraged.

Invited speakers: Zlatko Sitar, Detlev Schulz, Jacek M. Baranowski, Hiroshi AMANO, Bo SHEN.

Thin Film and Epitaxial Crystal Growth:

Bo SHEN; Thomas Kuech ; Tadashi OHACHI.
Topic: All aspects of the physical, chemical and technology of the formation of thin films will be covered from the epitaxial point of view. Applications to novel devices and new material properties as well as the technological aspects of epitaxy and film growth, especially, the epitaxial growth of semiconductor thin films and quantum structures, are encouraged.

Invited speakers: Joanna Mirecki-Millunchick, Joan Redwing, Francois H. Julien, Akihiko YOSHIKAWA, Katsumi KISHINO, Qi-Kun XUE.

Crystal Growth of Laser and Nonlinear Optics (Including Laser Ceramics):

Jiyang WANG; Peter Schunemann; Liudmila Isaenko; Yusuke MORI.
Topic: This session covers the growth, properties, processing, and device performance of laser host and nonlinear optical crystals including laser ceramics. Topics

include, but are not limited to, crystal growth methods, characterization and improvement of crystal and ceramic qualities, enhancement in size and performances, and fabrication techniques.

Invited speakers: Klaus Petermann, Kathleen Schaffers, Alexey A. Babin, Nobuhiko SARUKURA, Takunori Taira, Xutang TAO.

Growth of Scintillating, Ferroelectric, Piezoelectric and Multi-Functional Crystal: Haosu LUO, Antoni DABKOWSKA; K. Byrappa.

Topic: The goal of this session is for researchers in the fields of scintillating, dielectric, piezoelectric, multi-functional crystals to exchange their very recent findings and advances in crystal growth and technology in in-situ monitoring, characterization of property and structure, structure-property-performance relationships, and device applications etc.

Invited speakers: Reinhard Uecker, Martin Nikl, Zuoguang YE, Jingtai ZHAO, Krishan Lal

Crystals for Thermoelectric, Magnetic and Electron-Correlated Systems: Yanfeng CHEN; Gang CHEN; Vincent Fratello; Genda GU; Xianhui Chen.

Topic: This session will concentrate on the discovery, crystal growth and characterization of physical properties for the new thermoelectric, magnetic and strong electron-correlated materials. Materials of interest include, but not limited to, heavy fermions and rare earth compounds, borides, carbides, cuprates, pnictides, manganates, ruthenates, chalcogenides.

Invited speakers: Hiroshi EISAKI, C.T. LIN, Wei BAO, Zhifeng REN, Peter Johnson, Cedimir Petrovic, Qiang LI, Robert J. Cava, John M. Tranquada.

New Crystalline Materials and Novel Growth Technology: Rukang LI; Ning YE; Yoshinori FURUKAWA.

Topic: We are seeking papers in the areas of new crystalline materials. We are also welcoming papers on structural studies of crystals, crystal chemistry or structure-property relation studies. Papers in the following areas of novel crystal growth techniques are also welcome (high pressure crystal growth, hydrothermal and solvo-thermal methods, metal fluxes, crystal growth under extreme conditions, and crystal growth under micro-gravity, and others).

Invited speakers: Liudmila Isaenko, Jingui QIN, Kiyoshi Shimamura, Peter Schunemann.

Bulk Crystal Growth of Miscellaneous Materials: Lili ZHENG; David Bliss; Satoshi UDA; Peter Rudolph.

Topic: This session covers the science and technology of bulk crystal growth of semiconductors (elements like Ge, binary/ternary compounds, like CdZnTe), oxides and halides with focus on the improvement of industrial crystal growth processes with higher yield and defect control. Special attention is directed to the applications of external fields.

Invited speakers: Helge Riemann, Kyoichi KINOSHITA, Wanqi Jie, Evgenii Zharikov, David Joyce, Partha Dutta.

Industrial Crystallizations: Zhanggui HU; Partha Dutta; Masakuni MATSUOKA.

Topic: The topics will include processes that are suitable for growing crystals, for example laser crystals and nonlinear optical crystals, in large volumes with costs that are affordable and sustainable for large scale applications, extraction and purification of materials through crystallization especially for Fine Chemicals and

Pharmaceuticals, economic issues with the synthesis, and the disposal of by-products, etc.

Invited speakers: Vlad Klipov, G. Dhanaraj, David Witter, Alexander Gektin, Alexey Borodin, Valeri Tsvetkov.

Organic and Biological Crystallization: Xutang TAO; Xiangyang LIU; Jim De Yoreo; Gen SAZAKI.

Topic: The session includes, but not limited to, growth of organic crystals, crystal engineering, protein crystal growth, biomolecule-related assembly and crystallization, biomineralization, biometric approaches.

Invited speakers: Peter Günter, Jingliang LI, Peter Vekilov, Ido Braslavsky, Du NING, Ruikang TANG, Helmut Colfen, Juan Manuel Garcia Ruiz

Photonic, Phononic Crystals and Fundamentals: Shining ZHU; Jerry Floro; Cheting CHAN; Susumu NODA.

Topic: Phononic crystals, photonic crystals, plasmonics and metamaterials, QPM materials and optical superlattice.

Invited speakers: Nicholas FANG, Jensen LI, Sunao KURIMURA, Nan Ei YU.

Nanocrystalline Materials - Dots, Wires, Nano-tubes, Fullerenes etc.: Yadong LI; Michael A. Capano; Katsumi KISHINO.

Topic: The aim of this session is to facilitate discussions on systematically exploiting different crystal growth processes for the production of complex multifunctional nanostructures, as well as to develop novel self-organization strategies with high degrees of compositional and structural control.

Invited speakers: Hongjie DAI, Xiaogang PENG

In-situ Measurement and Characterization of Crystal Growth: Shaotang YIN; Suneel Kodambaka; Elias Vlieg; Katsuo TSUKAMOTO.

Topic: The topics of the sessions include, but not limited to *in situ* optical, electron, ion, and/or X-ray microscopies, spectroscopies, and scattering studies of (1) Growth of low-dimensional as well as bulk materials from solid, liquid, and vapor phases, (2) catalysis, chemical reactions, phase transformations, and other related phenomena, (3) surface morphological and microstructural evolution and (4) ultra-fast dynamics.

Invited speakers: Frances Ross, Wacek Swiech, Yoshikazu HOMMA, Thomas Lagrange, Flemming Besenbacher, Alfons van Blaaderen, Hirofumi YAMADA.

Advanced Characterization of Crystals and Defects: Dongfeng CHEN; Claudio Ferrari; Yoshikazu TAKEDA.

Topic: Possible topics in this session include, but not limited to, the following: (1) In situ monitoring of crystal growth by using x-ray diffraction or electron beams; (2) nano-meter scale characterization including modern synchrotron and neutron probing technique and (3) novel characterization techniques in bulk and epitaxy growth including impurity doping, interfacial phenomena and defect reactions (4) topography.

Invited speakers: Chun Loong, Dehong YU, Yuntao LIU, Liberato De Caro, Vincenzo Grillo

REGISTRATION & HOTEL INFORMATION

Registration Fees:

(1) Regular registration: Advanced-registration (Before July 10, 2010): US\$580; Registration (After July 10): US\$680; (Each regular registration includes: one proceeding CD, one ticket to the banquet dinner, and meal tickets for lunches and suppers during the meeting, hotels usually provide breakfast, a tour to Great Wall or similar sites for a half day);

(2) Student registration (with student certification card). Advanced-registration (Before July 10, 2010): US\$400; Registration (After July 10): US\$500. Each student registration includes: one proceeding CD, one ticket to the banquet dinner, and meal tickets for lunches and suppers during the meeting;

(3) Spouse's registration fee (no meal/ banquet dinner): US\$25;

(4) Meal ticket (includes lunches and suppers during the conference) for spouse: US\$160;

(5) Additional banquet ticket: US\$60.

Registration will be open on December 1, 2009

Hotels: check the web-site <http://iccg16.tipc.cn/> for updated information

COMMERCIAL AND SCIENTIFIC EXHIBITIONS

Commercial and Scientific Exhibitions will be held in conjunction with the ICCG16 conference on August 9-12, 2010 at Beijing International Convention Center. The exhibitions are designed for vendors to exhibit their products related to the growth of crystals such as equipments, instruments, crucibles, powder materials, crystals or published books and databases etc.. About 60 booths will be available for display and the entries will be accepted in the order of application's arrival.

(1) The foot space for each booth is $3 \times 2 \text{ m}^2$ (width by depth).

(2) The standard commercial exhibition fee for each unit is \$1500. Two spot lights, electric plugs, one table, two chairs and company identification sign will be provided. In addition, one member from each exhibitor will be given regular registration treatment to access conference technical session, a proceeding CD, meals and the banquet dinner.

If special equipment and supplies (furnishings, DVD player etc) are required, or question about the entries and exhibition, contact Dr. Shen ZHANG (zhangshg@sunm.shcnc.ac.cn) or Muxiong Wu (scs@mail.sic.ac.cn).

SPONSORSHIP

The conference organizing committee of the ICCG-16 welcome sponsorships from all interesting parties such as manufacturer for crystal growth equipment, materials supplier etc or research institute. As a token reward, the conference will provide booth for display and other service based on the level of sponsorship.

Silver: Support with US\$4000 or above. The name and logo of the supporting party will appear at the website of ICCG-16, given one booth of a standard exhibition and two persons free registration to access the conference technical session and obtain proceeding CD, meals and the banquet dinner tickets.

Golden: Support with US\$6000 or above. Will have all the privileges as the Silver level of sponsorship. In addition, the name and logo of the supporting party will appear in the Program & Abstracts Volume of the conference.

Diamond: Support with US\$8000 or above. Will have all the privileges as the Golden level of sponsorship. The organizing committee of ICCG-16 will also provide support for special request for the exhibition etc.

SUMMER SCHOOL

The 14th International Summer School on Crystal Growth will be held August 01-07, 2010 at Dalian, China. In following tradition, the School will be held the week prior to the 16th International Conference on Crystal Growth in Beijing, China.

For further information contact:

Mu WANG, muwang@nju.edu.cn

Dongfeng XUE, dfxue@chem.dlut.edu.cn

K. TSUKAMOTO, ktsuka@m.tains.tohoku.ac.jp

AWARDS The Laudise, Frank and Scheiber Prizes will be awarded through the auspices of the International Organization of Crystal Growth, A. A. Chernov, President. For further details see the website at <http://www.iocg.org>

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ICVPE-14 Zhanguo WANG (Institute of Semiconductors, CAS)

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