First Announcement

Who wouldn’t be fascinated by the perfectly symmetrical, transparent and shining crystals with sharp edges and corners, whether it is jewelry, diamond, icicle or sugar! Growing crystals of a desired size and shape is considered an art as well as a science. On one hand growing the smallest possible, viz., nanometer-sized crystals is a hot topic in nanoscience and technology, growing millimeter sized crystals is a challenge for researchers working in the area of X-ray crystallography. Growing centimeter sized crystals is not only important for industrial and commercial applications but also aesthetically pleasing! The crystallization techniques are being used to separate and purify compounds in research and industries.

We are pleased to inform you that the Department of Chemistry at the National University of Singapore is organizing the Singapore Crystal Growing Competition this year. This creative and fun-raising biennial crystal growing challenge is opened to students in secondary schools, international schools, junior colleges, ITE colleges and polytechnics in Singapore. The challenge provides a unique opportunity for the students to discover the importance of this technique in chemistry. Further growing your own crystals can be a creative way to learn many aspects of basic physics, chemistry, geology and biology. Above all crystal growing is lots of fun! By participating in this competition, students will learn the art and science of growing crystals. They will also have an opportunity to exercise their creativity in growing something beautiful. Moreover, there is also the challenge of outdoing your peers in school as well as at the National level.

There are three categories in this competition. They are:

**Junior Level** - for secondary school students,

**Senior Level** - for junior college, ITE college and polytechnic students, and
Open Level – for secondary, junior college, ITE college and polytechnic students. In order to compete in this category, participating institutions should also have submitted an entry for the junior or senior categories.

Each institution may submit a maximum of two entries in each category and no more than two students should be involved with each entry.

All crystals must be grown at their respective institutions, under the supervision of a teacher. Based on common scientific practices, students should record all their experiments in a logbook. Although all students are encouraged to grow crystals, the teacher, or delegate, can select only the best two to represent their institution in this challenge at each level. You are required to follow the appropriate safety procedures.

Prizes

First, second, third and consolation prizes will be awarded for each category. These include trophies for the first, second and third prize-winning entries. Also, cash prize of $400, $300, $200 and $50 will be awarded for the first, second, third and meritorious prizes. Further two more awards may be presented: one for the best display & creativity award (Poster and crystal display) and the second one for the biggest single crystal award.

The prize-winning crystals and any other interesting crystals displayed, posters and the logbooks will be retained by the Department of Chemistry, NUS and may be used for display purposes. By entering this competition, participants agree to abide by this policy.

The details about the crystals to be grown will be announced on May 21st 2012. The details will be available at:
http://www.chemistry.nus.edu.sg/events/CommunityOutreach/ncgc/index.htm
DISPLAY

Participants should also prepare a poster for their exhibit. The poster must not exceed 65cm x 55cm in size and should include the following information:

- Name of crystal
- Name and address of participants
- Photographs showing at least three different stages of crystal growth
- Experimental procedure (e.g. solvent system used during crystallization, amount of compound used, percentage yield, equation/mechanism of reaction (where applicable), etc.)
- Conclusion

Any violations to the size of the poster may not be considered for evaluation by the judges. Participants are required to display their crystal, logbook and poster in the Competition Hall at NUS in September. Entries will be judged on September 29 (tentative date) and the prize-giving ceremony will be held on the same day September 29 (tentative date)

Registration Fees

There will be a registration fee of $50 per team entering the challenge for the junior and senior categories, to cover the cost of this event. The money should be payable to “National University of Singapore”. The registration fees will not be refunded.

ENQUIRIES

For further information, please contact:

Dr Leong Lai Peng (Ph: 6516-2917; E-mail: laipeng@nus.edu.sg )

Prof J.J. Vittal (Ph: 6516-2975; E-mail: chmjjv@nus.edu.sg )
National Crystal Growing Challenge

If your Institution is interested in participating in the above mentioned competition, please complete this form below and send/fax it to the following address:

Organizers
10th Singapore National Crystal Growing Challenge
Department of Chemistry, National University of Singapore
3 Science Drive 3, Block S8 Level 3 (Admin Office)
Singapore 117543
Fax: 6779-1691

Registration for this competition closes on Monday 21 May 2012. The details about the crystals to be grown will be announced on Monday, 21 May 2012 on our Website:
http://www.chemistry.nus.edu.sg/events/CommunityOutreach/ncgc/index.htm
**Registration form for the 10th Singapore National Crystal Growing Challenge, 2012**

Please tick the categories that you will be participating in:

- **JUNIOR** - Number of entries
  - 1 [ ]
  - 2 [ ]

- **SENIOR** - Number of entries
  - 1 [ ]
  - 2 [ ]

- **OPEN** - Number of entries
  - 1 [ ]
  - 2 [ ] (registration fee waived)

Registration fees for [ ] teams.

1. **Payment by Cheque**

A total of $_________ (@ $50 per team) payable to “Crystal Growing Challenge, NUS” “National University of Singapore” is attached. The Cheque number is: ____________.

2. **Payment By Interbank GIRO (IFAAS)**

Credit your payment to:
National University of Singapore
DBS Account No: 7171-032-0320003133

For payment via GIRO, pls indicate the invoice number and Chemistry Dept – Crystal Growing Challenge under the remarks.

_The prize-winning crystals and any other interesting crystals, logbook and poster will be retained by the Department of Chemistry, NUS. By entering this competition, I agree to provide the crystals, logbook and poster to the Department if they request._

Name of Teacher Supervisor: _____________________________________________________________

Signature: __________________________________________________________________________

Address: ____________________________________________________________________________
____________________________________________________________________________________

Contact Number: _______________________________________________________________________
Fax Number: __________________________________________________________________________
E-mail: _______________________________________________________________________________