



Experiments in Laboratories are fundamentals for teaching and learning Chemistry. In these practical workshops, Mr Chan will share some non-traditional, innovative and interesting methods for conducting Chemistry Experiments. Participants will have hands-on experience on low-cost and innovative micro-scale experiments and be engaged in pre and post-lab discussions, with reference to the current Singapore Syllabus context. Participants will be able to see how micro-scale equipments can be acquired easily to replace those expensive commercial ones and how they are able to save chemicals, reduce hazards and promote "Green Awareness".



For 'A' Level Teachers – 7 Jun 2011, 9am to 4pm

Designing Chemistry Projects and Experiments using Micro-scale Experiments

For the first half of the day, teachers will experience a project on *identification of commercial "rubbing alcohol" by oxidation and preparation of derivative*. Teachers will see how such well-designed organic Chemistry project, using micro-scale equipments, are suitable for **School-based Science Practical Assessment (SPA)** which will involve students in a number of required practical skills.

For second half of the day, teachers will have hands-on experience on the following experiments:

- Conductometric titration
- pH titration or kinetic order of iodine clock reaction

All participants will get a set of *micro-scale conductance kit* designed and made by Mr KM Chan.

About the Organiser

Synergyst is a training consultancy passionate in promoting Creative Teaching and Learning for Teachers and Students. Working with a pool of enlightened and creative educators, we provide a wide range of services, including workshops, enrichment programmes, exciting science and maths shows, educational trips and designing of science corners or exhibition.

For 'O' Level Teachers- 8 Jun 2011, 9am to 12pm

Innovative Chemistry Experiments with Micro-scale Equipments

Teachers will have hands-on experience on the following experiments:

- Conductometric titration
- Dehydration of ethanol
- Empirical formula of copper (II) oxide
- Free radical bromine substitution of alkane

All participants will get a set of *micro-scale conductance kit* designed and made by Mr KM Chan.

About the Speaker

Mr KM Chan is the director of MicroChem Lab, Hong Kong. Before that, he was the Chemistry Curriculum Planner from the Curriculum Institute of Education and Manpower Bureau in the Government of Hong Kong. He was also the Head of Chemistry Department for St. Stephen's College in Hong Kong. Mr Chan is an expert in Microscale Chemistry and has published papers related to this area in countries like Israel, Mexico, Singapore and Hong Kong.

Yes! Please register me for

Venue: TBC (No Lunch will be provided for all workshops)

- "Designing Chemistry Projects and Experiments using Micro-scale Equipments" for A Levels, 7 Jun 2011, 9am -4pm**
 - Normal rate of S\$220 nett/person
 - Group rate of S\$200 nett/person for 3 or more
 - Past participant at \$190 nett*
- "Innovative Chemistry Experiments with Micro-scale Equipments" for O Levels, 8 Jun 2011, 9am -12pm**
 - Normal rate of S\$120 nett/person
 - Group rate of S\$100 nett/person for 3 or more
 - Past participant at \$90 nett*

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For registration, please fax, mail or email your particulars to and make your cheque payment payable to **Synergyst Pte Ltd**, 371 Beach Road #03-31 Keypoint Singapore 199597. Upon receipt of registration, any request for cancellation will be charged a 30% admin fee and must be made in writing, no later than 7 working days before the event. In the event of cancellation less than 7 working days or if participant fails to attend, the participant is liable for the full fee. Synergyst reserves the right to amend, postpone or cancel the event due to unforeseen circumstances.

* past participants refer to those who had attended Mr KM Chan's Chemistry workshops only.

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