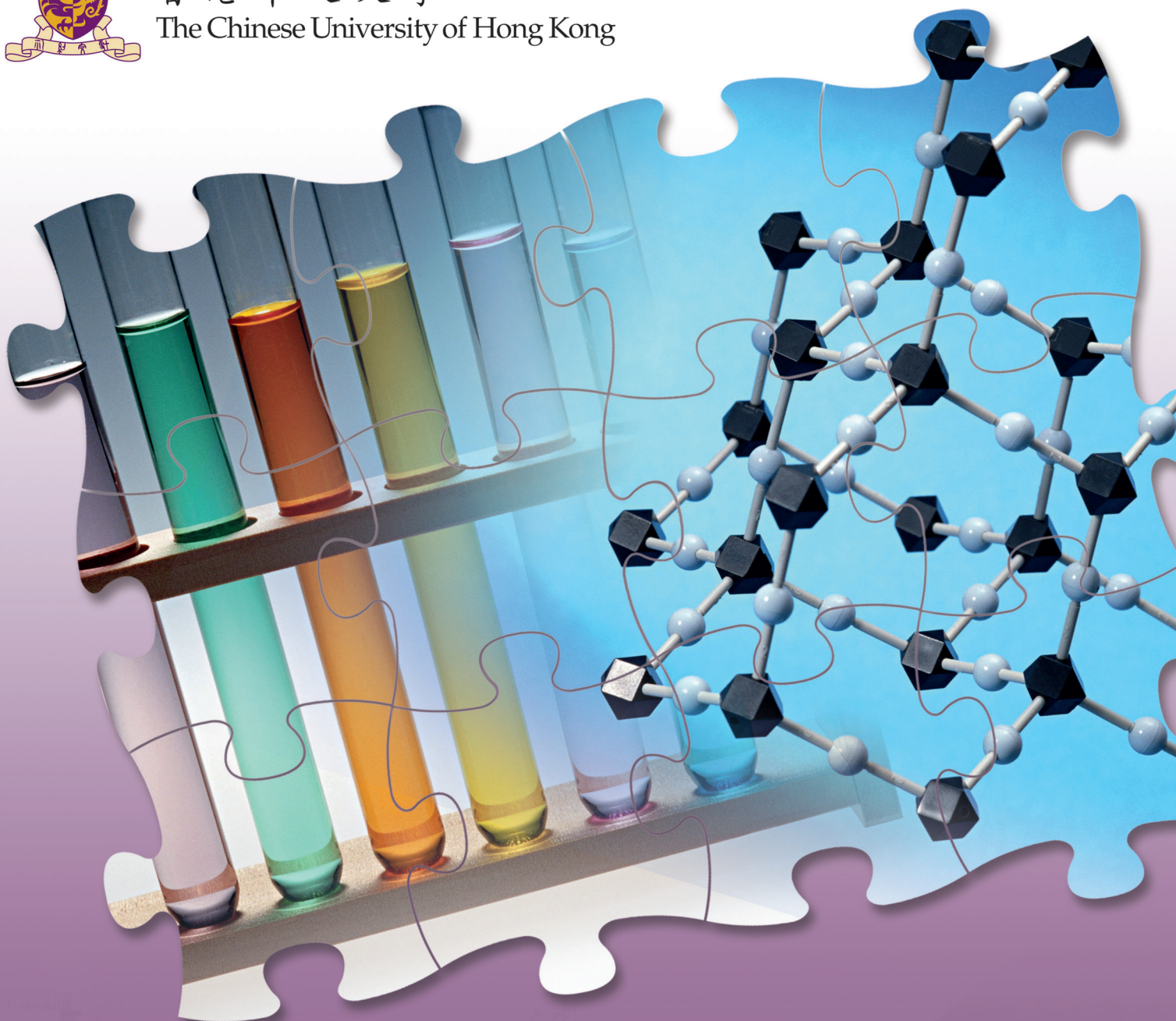




香港中文大學
The Chinese University of Hong Kong



DEPARTMENT OF
CHEMISTRY
化學系



香港中文大學理學院
FACULTY OF SCIENCE
THE CHINESE UNIVERSITY OF HONG KONG

DEPARTMENT OF CHEMISTRY

GET TO KNOW US

The Department of Chemistry is one of the largest and best equipped departments in CUHK. We have about 20 professors actively engaging in teaching and research in virtually all branches of frontier chemistry. CUHK BSc. students (**JUPAS code: JS4601**) can declare chemistry major through the **Science Broad-based Admission Scheme**. Currently there are about 170 undergraduate and 120 graduate students enrolled in the Department.

SCIENCE, TECHNOLOGY AND RESEARCH STREAM (STARS)*

Hosted by the Faculty of Science, it intends to admit top students with strong ability and interest to gain wider exposure and research experience during their undergraduate studies. It aims at training future research scientists. Students will need to complete an experiential learning for not less than 4 consecutive weeks outside Hong Kong. It would extend students' exposure and thus make them appreciate new cultures, hone language skills, grow confidence, and prepare for a career in a globally connected world.

** STARS is an add-on stream which must be taken with Main Stream / Enrichment Stream / Testing and Accreditation Stream.*

STREAMS THAT SUIT YOUR NEEDS

Under the 4-year curriculum, CUHK BSc. students can choose to declare major in one of the following Chemistry streams:

• Main Stream

It is the most flexible stream bearing the least required units in major, in which students can take a wider variety of courses offered by other programmes. Its great flexibility broadens the scope of the programme and prepares the students for various career paths.

• Enrichment Stream

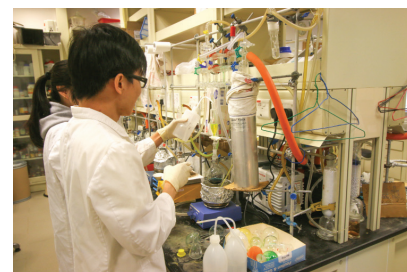
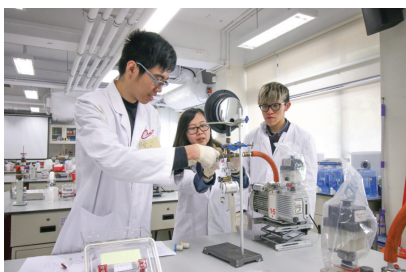
It is specifically designed for students who wish to further their studies in graduate programmes in chemistry or related fields. The experience gained through problem-solving and research helps to cultivate independent thinking and critical judgement, which prepare students for further studies in chemistry.

• Testing and Accreditation Stream

It is designed for students who wish to join the testing and accreditation industry after graduation. Students are required to do related credit-bearing internships in testing laboratories where they can apply their knowledge learned from the stream.

In all streams, students will study chemistry in general areas including analytical, inorganic, organic, physical and theoretical chemistry. Specialised areas including bioinorganic chemistry, organometallic chemistry and polymer chemistry will also be covered. Students will be required to take the faculty package as well.

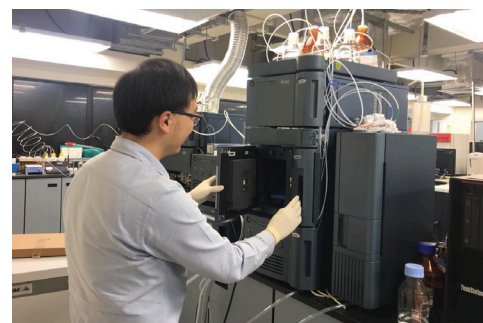
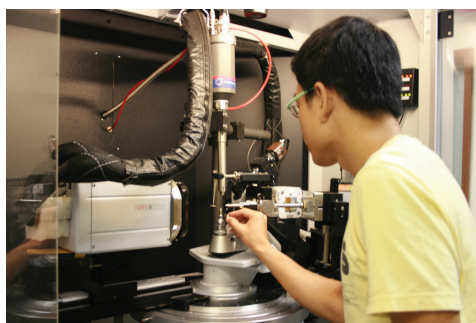
Undergraduate students in laboratory classes





CLEAR ARTICULATION PATH

The Department offers graduate MPhil-PhD programme which involves coursework and a thesis embodying the results of original research. Normally, financial assistance in the form of postgraduate studentship is provided.



INTERNSHIP OPPORTUNITIES TO ABSORB EXPERIENCE

Internship opportunities in different sectors are available to students. Starting from 2015 summer, our students were offered internships in private companies, secondary schools and testing and certification labs. These allow students to acquire hands-on experiences which enrich their learning, and gain exposure to chemistry-related industrial and commercial sectors. In 2018 summer, our students participated the internship programme to a renowned chemical company in Shanghai.



Law Ching Man

*CMA Testing and Certification
Laboratories internship participant*

“During the 8-week internship, I have a chance to learn and handle the accredited chemical tests. Also, I have acquired an understanding of the daily operation of an accredited commercial laboratory in Hong Kong, including the general management and actual procedure of chemical tests. The most crucial thing that I have learnt was the commercial laboratory safety and how to protect myself in such a high risk working environment.”



Tai Sin Lam

BASF internship participant

“During the internship, I worked in a research department ... I had lots of chances to learn to use different kinds of instruments which were not seen in the laboratories of the university. In such a big company, there are a variety of chances to learn, apart from the laboratory technique.”



Wong Yim Fung

*Lok Sin Tong Young Ko Hsiao Lin
Secondary School internship participant*

“This internship programme has provided me a great start of my teaching career. I believe in ‘No enthusiasm, no gain’. Take every moment to learn, the outcomes can drive you to success easier.”



Graduation Photo



Joint University Soccer Match

WORK HARD, PLAY HARDER

Both the Department and Chemistry Society organise a wide range of fun social and recreational activities to interested students. Not only can it be beneficial to students' development, but it also creates a harmonious and friendly study environment.



The Inauguration of the Chemistry Society



Graduation Dinner

AMPLE CAREER PROSPECTS

The career of our graduates is highly diversified. Besides continuing to pursue higher degrees in chemistry or related disciplines, some of our graduates are engaged in chemistry-related careers while some serve in primary or secondary schools. Some may choose to develop their careers in commerce and industry sectors based on their sound training in analytical perception and technical knowledge. Many of our former graduates are now taking prominent positions in different sectors, including:

- Environmental monitoring
- Forensic science
- Quality assurance in the government, private laboratories or schools
- Secondary school principals
- Professors / lecturers in local and overseas tertiary institutions
- Chemists in the government laboratory
- Senior executive officers in chemistry-related businesses and industries
- Researchers in scientific research-and-development sectors



INTERNATIONAL EXCHANGE TO EXTEND HORIZONS

The Department provides Chemistry major students with exchange opportunities. The Faculty has also established collaborations with the top universities in Taiwan, e.g. National Taiwan University. Moreover, the University organises large-scale exchange programmes. In recent years, our students have spent a term or a whole year in Denmark, Japan, Singapore, Taiwan, Canada, etc. This enriches students' learning experiences.

Wan Shui Yan

National University of Singapore exchange participant



"After visiting National University of Singapore, I understand more about the university system of Singapore and have a chance to study courses including Nanochemistry, which is an immensely popular topic in modern times. This allows me to immerse myself in the academic atmosphere in such a global university."

Ho Ka Ka

Stockholm University (Sweden) exchange participant



"It was an enriching and fulfilling semester in Sweden. Not only did I explore the power of entrepreneurship in science, but I also made a bunch of intelligent and supporting friends. Most importantly, I have achieved personal growth. I become more competent and confident to declare myself as the future game-changer."



OVERSEAS SUMMER RESEARCHES TO ENRICH KNOWLEDGE

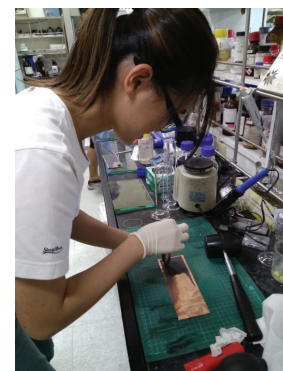
The Department has conducted summer research programmes outside Hong Kong, in addition to the local ones. So far our students have carried out summer research programmes in top universities in foreign countries such as UK (University of Warwick), Japan (Kansai University), Singapore (National University of Singapore) and Taiwan (National Tsing Hua University, National Central University, National Chiao Tung University).

Wong Lok Tung Crystal

National Central University (Taiwan) summer research participant



"When I successfully made the target product on my own, a sense of satisfaction built up and I got more confident than before in performing experiment. Thank you Chemistry Department for giving me a chance to join this fantastic exchange program ... it is worth going on exchange. Grab the chance and widen your horizon!"

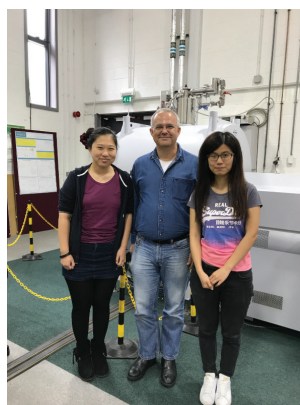


Huang Ho Ying

University of Warwick (UK) summer research participant



"It broadened my horizon ... I made a lot of new friends, tried many new things, experienced how a PhD student's life looks like, and so on. The most crucial thing is that I learnt in a different environment and gained exposure to forefront research through the ASMS talks every day. This programme made me determined to pursue a higher level degree in my future."



COURSE STRUCTURE WITH HIGH FLEXIBILITY

Required Courses*

| | Main Stream | Enrichment Stream | Testing & Accreditation Stream |
|----------------------------|---|---|--|
| 1st Year | <ul style="list-style-type: none"> Faculty package Fundamentals in Physical Chemistry | | |
| 2nd Year | <ul style="list-style-type: none"> Student Oriented Teaching Analytical Chemistry Main Group Chemistry Fundamentals of Spectroscopic Analysis Organic Functional Groups: Structure and Reactivity Introduction to Quantum Chemistry Thermodynamics and Chemical Equilibrium Integrated laboratory courses | | |
| 3rd Year | <ul style="list-style-type: none"> Instrumental Analysis Transition Metal Chemistry Organic Reactions: Reactivity and Selectivity Chemical Kinetics Main theme laboratory courses | | |
| | <ul style="list-style-type: none"> Two advanced Chemistry elective courses | <ul style="list-style-type: none"> Conjugated Molecules and Synthetic Polymers Introduction to Material Chemistry One advanced laboratory course | <ul style="list-style-type: none"> Accreditation of Laboratory Tests One testing laboratory course Three advanced Chemistry elective courses |
| 4th Year | <ul style="list-style-type: none"> Problem-based Learning in Chemistry Three advanced Chemistry elective courses | <ul style="list-style-type: none"> Undergraduate Thesis Four advanced Chemistry elective courses | <ul style="list-style-type: none"> Problem-based Learning in Testing and Accreditation Internship in Accreditation Laboratory Three advanced Chemistry elective courses |

Faculty Package*

Required:

- Principles of Modern Chemistry
- Essential Physics **OR** General Physics **OR** University Physics I – Introduction to Mechanics, Fluids and Waves

Electives (choose at least one course from the below list):

- University Mathematics for Applications
- University Mathematics
- Methods of Matrices and Linear Algebra
- Biochemistry of Health and Disease
- Basic Concepts in Biological Sciences
- Introduction to Biological Sciences
- Introduction to Statistics
- Statistics for Life Sciences

Advanced Chemistry Elective Courses

Examples of the Courses:

- Chemical Applications in Forensic Science
- Pharmaceutical Chemistry
- Industrial Chemistry
- Food Testing
- Environmental Analysis
- Accreditation of Laboratory Tests
- Organic Chemistry in Life
- Bioinorganic Chemistry
- Advanced Inorganic Chemistry
- Advanced Analytical Chemistry
- Quantum Chemistry
- Bioanalytical Methods
- Asymmetric Organic Synthesis
- Advanced laboratory courses

* Parts of Programme details are pending for endorsement and hence subject to changes.

DEPARTMENT OF CHEMISTRY | 化學系

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