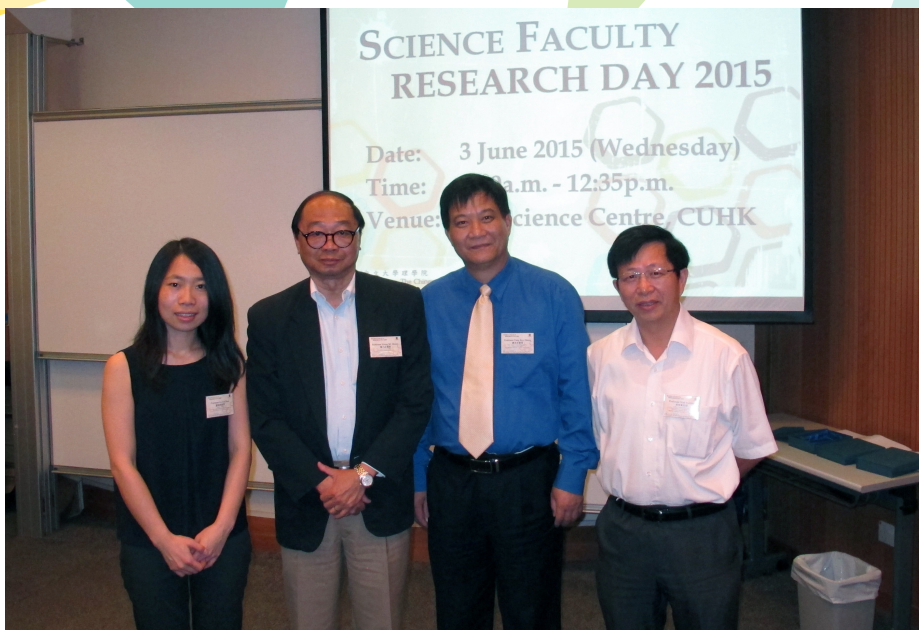




# Science Faculty e-Newsletter



## Research about ENERGY

The 2015 Science Faculty Research Day has been successfully held at L2, Science Centre on 3 June 2015. This year's focus was interdisciplinary research within Energy-related discoveries. The Faculty was pleased to have invited three distinguished guest speakers to share their cutting-edge research work and expertise.

Professor TANG Ben Zhong, Department of Chemistry of the Hong Kong University of Science and Technology, a world-renowned chemist and a member of the Chinese Academy of Sciences, elaborated his findings on AIE research, through his presentation titled "Aggregation-Induced Emission: Together We Stand, United We Soar!". He explained the working mechanism of this unique AIE phenomenon and explored its various technological applications, including detection of CO<sub>2</sub> gas, drug screening,

identification of live and dead bacteria, forensic science, criminal investigation and so forth.

Professor LU Yi-Chun, Assistant Professor of the Department of Mechanical and Automation Engineering, presented us with new material design principles for clean energy storage and conversion. She also talked about reaction mechanism and reaction kinetics, the chemical natures of the reaction products and the correlation between reaction processes and potentials.



Professor TANG Ben Zhong showing his findings on "Aggregation-Induced Emission (AIE)gens"

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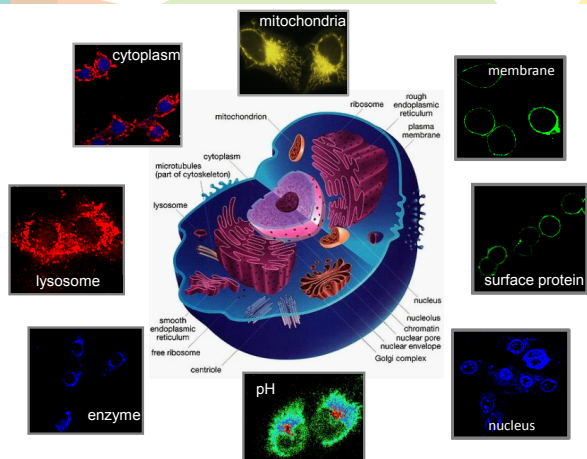
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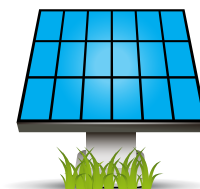
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AIE Map in Living Cells --- by Professor TANG

Professor XIAO Xudong, Department of Physics and Institute of Environment, Energy and Sustainability of CUHK shared with us his research in photovoltaic solar energy with applications to surface science, nano science and renewable energy science and engineering. The two copper-containing chalcogenide-based semiconductors he presented could reduce production costs on the deployment of solar electricity. He stressed the global-scale application of solar electricity will not only overcome the energy and environment crisis but also sustain a healthy economic and civilisational development.



## Words to Graduates - by Professor Yau



Professor YAU Shing-tung (left) shares his experience with the audience, as well as giving advice and answering questions from recent graduates

Professor YAU Shing-tung, Fields Medallist, Wolf Prize Laureate and Director of the Institute of Mathematical Science (IMS), gave a lecture about his pursuit of mathematical knowledge and research on 12 June at the YIA, CUHK.

He enlightened graduates by giving a lively account of his learning journey at CUHK and UC, Berkeley. He focused on his experience of scholarship at the Chung Chi College, and how he established multiple networks from his time at the University. He also talked about the difficulties he encountered and how he strived to achieve his goals during his postgraduate studies in UC, Berkeley.

Professor YAU's speech urged recent graduates be committed, in search of their dreams, and refrained from being lured into temptations which may part their ways, diverging from their initial goals. He felt that sticking closely to one's research interest, meanwhile being aware of current trends is a good way of bridging the two paths. He also reassured those who put effort into their work will not be disappointed. His search for self-fulfilment, rather than monetary reward, has been satisfying.

Professor YAU's sharing was not only inspirational but it also reminded us of our original intentions, urging us to work hard and re-evaluate our steps, while pursuing our dreams.

## Cross Strait Particle Physics Meeting 2015

A group of physicist gathered at CUHK from 6-8 July to share their knowledge and to initiate exchange between scientists in similar fields of Physics from Hong Kong, Mainland China and Taiwan. Participants assembled at the lecture theatres of the Science Centre, and showcased a variety of edge-cutting research, in order to further explore and examine the potential fields of studies in Physics.

Participants were differentiated into groups according to their research interests, and different panels were held for various topics, ranging from Higg's mechanism to dark matter; nuclear to cosmology etc. The meeting provided a marvellous opportunity for physicists to get together and also created a substantial networking and bonding environment for scientists in similar fields to reach out and cross-collaborate.



Group of physicists at the Cross-Strait Physics Meeting 2015

## Life Science students take home the Top-Prize award in the Hong Kong Challenge Cup 2015



School of Life Sciences students SEAK Chi U, LOO Fong Chuen Jacky and LEUNG King Pong (2nd to 4th from left) were presented with the Top Prize at the Hong Kong Challenge Cup 2015 awards ceremony

Students from the Faculty of Science showed off their scientific finesse in the 2015 Challenge Cup Competition. LEUNG King Pong, LOO Fong Chuen Jacky and SEAK Chi U, a team consisting of undergraduate and postgraduate students from the School of Life Sciences walked away with the Grand Award and the First Place Award (Life Sciences) for their practical invention of a “Solution for One Step Sewage Treatment”. The team members hope that their design could help to establish a new one-step international standard for sewage treatment, thus increasing the life-span of existing sewage treatment plants, and reducing valuable land used or footprint for sewage treatment works. The team qualified for a further round of competition, and will be representing Hong Kong in the National University Students Challenge Cup, set to take place at the Hong Kong University of Science and Technology in November.

More information about the Hong Kong Challenge Cup can be found at: <http://www.hkchallengecup.com/>

## Life Science team triumphs again at Creativity Award

The winning team from the Hong Kong Challenge Cup 2015 won yet another competition. Team members LEUNG King Pong, LOO Fong Chuen Jacky and SEAK Chi U were crowned Champion of the Postgraduate Group for the Professor Charles K. Kao Student Creativity Awards 高錕教授學生創意獎 (PCKKSCA).



The Professor Charles K. Kao Student Creativity Awards is a biannual competition which aims at promoting the culture of innovation amongst CUHK students. This year's theme is “Innovations for Better Life”.

The team was subsequently awarded HK\$18,000 to acknowledge their efforts, and as an additional prize, they gained membership of the Professor Charles K. Kao Scholars Association. Congratulations!



## ENS student granted French Scholarship

CHAN Nga Kwan Katie (2015 graduate), from the Environmental Sciences Programme has been awarded the Alexandre Yersin Scholarship to study MSc. in Sustainable Management of Pollution at Universite Catholique de Lille, starting this coming October.



Katie is very grateful to have been an awardee and would like to express her most sincere gratitude to Professor CHAN King Ming and Professor YU Chai Mei, Jimmy, for their valuable advice and support towards her further studies.

The Alexandre Yersin Scholarship is awarded to Hong Kong or Macau students annually to support graduate studies in France. The award includes an allowance of €660 per month to support her studies, and an intensive French course at Alliance Française before departure. Katie shall set off to France at the end of August 2015.



## FNS students compete for summer internship opportunity at Meiriki JP

The Food and Nutritional Sciences (FNS) Programme, Faculty of Science, joint hands with Meiriki JP to co-organise “命力營全城”, a competition to design a community health programme in order to promote balanced nutrition and wellness.



Celebrating success! From Left: LAU Wai Ting, Professor CHEUNG Chi Keung Peter, CHAN Sze Wing and CHENG Pui Man

This year's theme is “Top 5 unhealthy deeds of Hong Kongers”. As competitions of similar status are rare in town, Professor CHEUNG Chi Keung Peter, Director of FNS Programme, appreciates Meiriki JP for the collaboration, and our students cherished this opportunity to participate and work with Meiriki.

The final competition was held on 14 May 2015. Year 3 students LAU Wai Ting, CHAN Sze Wing & CHENG Pui Man came out top amongst their classmates, by presenting their ideal community health programme to the panel of judges (formed by Meiriki JP's management team, Professor Cheung, the President of Hong Kong Nutrition Association Limited, and general managers from Watsons Hong Kong and the Boys' and Girls' Clubs Association of Hong Kong). The prize award ceremony was held on 2 June 2015 at CUHK. The winning team was granted a HK\$50,000 scholarship, as well as earning themselves a 3-month internship with Meiriki JP to put their plan into practice. The internships began in June, and shall run till August, with expert mentorship from Meiriki JP's management team.



## WMO conferred Research Award for Young Scientists 2015 to Professor Amos Tai

Earth Systems Science Professor TAI Pui Kuen Amos has recently been awarded the World Meteorological Organisation (WMO) Research Award for Young Scientists for 2015. The award was presented to Professor Tai for his paper in Nature Climate Change, Volume 4, 2014, titled: Threat to future global food security from climate change and ozone air pollution.

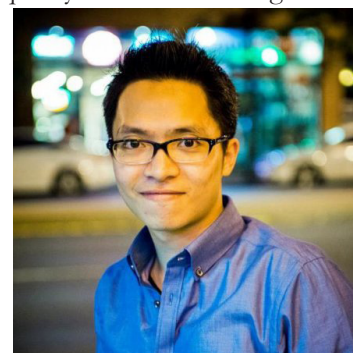
Professor TAI's paper looks into the uncertainties of securing the production of staple food in the future, as it is predicted that this will be affected by the ever-changing climate. The study also projects the trends of ozone production, and its effects on crop cultivation. Professor TAI's publication explored the realistic situations of modern day climatology, as well as making projections based on two scenarios (with and without mitigation), giving



readers an overall trend prediction of the degree of influence, thus calculating the malnutrition rates of 2050.

The WMO Research Award for Young Scientist is granted annually by the Executive Council of the World Meteorological Organization (WMO) in Geneva as a means of encouraging young scientists (not over the age of 35), particularly in developing countries, for outstanding research work in all fields of meteorology and hydrology. More about WMO, please visit [www.wmo.int](http://www.wmo.int).

Meanwhile, Professor TAI has also been awarded the CUHK Vice-Chancellor's Exemplary Teaching Award 2014, which recognises his excellence in teaching and dedication in quality education. Congratulations!



Scan the QR code to read Prof. TAI's paper



# New Appointment in Deanery and Departments

(effective 1 August 2015)

## *Deanery Members*

Professor WONG Nai Ching Henry  
Professor AU Kwok Keung Thomas  
Professor WONG Hoi Ying  
Professor XIE Zuowei  
Professor WANG Jianfang  
Professor AU Wing Ngor Shannon  
Professor SONG Xinyuan

Dean of Science  
Associate Dean (Education)  
Associate Dean (Student Affairs)  
Associate Dean (Research)  
Assistant Dean (Education)  
Assistant Dean (Student Affairs)  
Assistant Dean (Research)

## *Department Chairmen and School Director*

Professor WONG Kam Bo  
Professor YU Chai Mei Jimmy  
Professor CHAN Hon Fu Raymond  
Professor NG Hang Leung Dickon  
Professor SHAO Qi Man

Director, School of Life Sciences  
Chairman, Department of Chemistry (till 31 Dec 2015)  
Chairman, Department of Mathematics  
Chairman, Department of Physics  
Chairman, Department of Statistics

## Luncheon for Retiring Staff

On 26 June 2015, the Faculty organised a farewell luncheon in honour of a number of retiring staff. The list of retiring staff is as follows:

Professor AU YEUNG Chik Fan Steve	Department of Chemistry
Professor LEUNG Wing Por	Department of Chemistry
Professor ANG Put O Jr.	School of Life Sciences
Professor HO Wing Shing John	School of Life Sciences
Professor LEUNG Kwok Nam	School of Life Sciences
Professor YU Kin Wah	Department of Physics
Mr. YAU Lap Shing	Department of Physics

The farewell luncheon gathered the retiring staff and their respective Department Chairmen/School Director, celebrating their years of dedication towards science and expressing the utmost gratitude towards them. The efforts and contributions of the staff are much appreciated by all.

The retirement of the above-mentioned staff shall take effect on 1 August 2015.

The Faculty wishes our retiring staff the very best as they turn the page, and move onto an exciting chapter of their lives.



*Faculty's Dean Team bids farewell to our treasured retiring staff*

## Physics Research recognised by the Ministry of Education of China

With the contribution from Professor XU Lei of the Physics Department, the project "Rich phenomena and interesting physics in complex systems" has recently been awarded 2<sup>nd</sup> Class in the 2014 Ministry of Education Higher Education Outstanding Scientific Research Output Awards (Science & Technology) 國家教育部2014年度高等學校科學研究優秀成果獎(科學技術).

## Recent External Grants Received

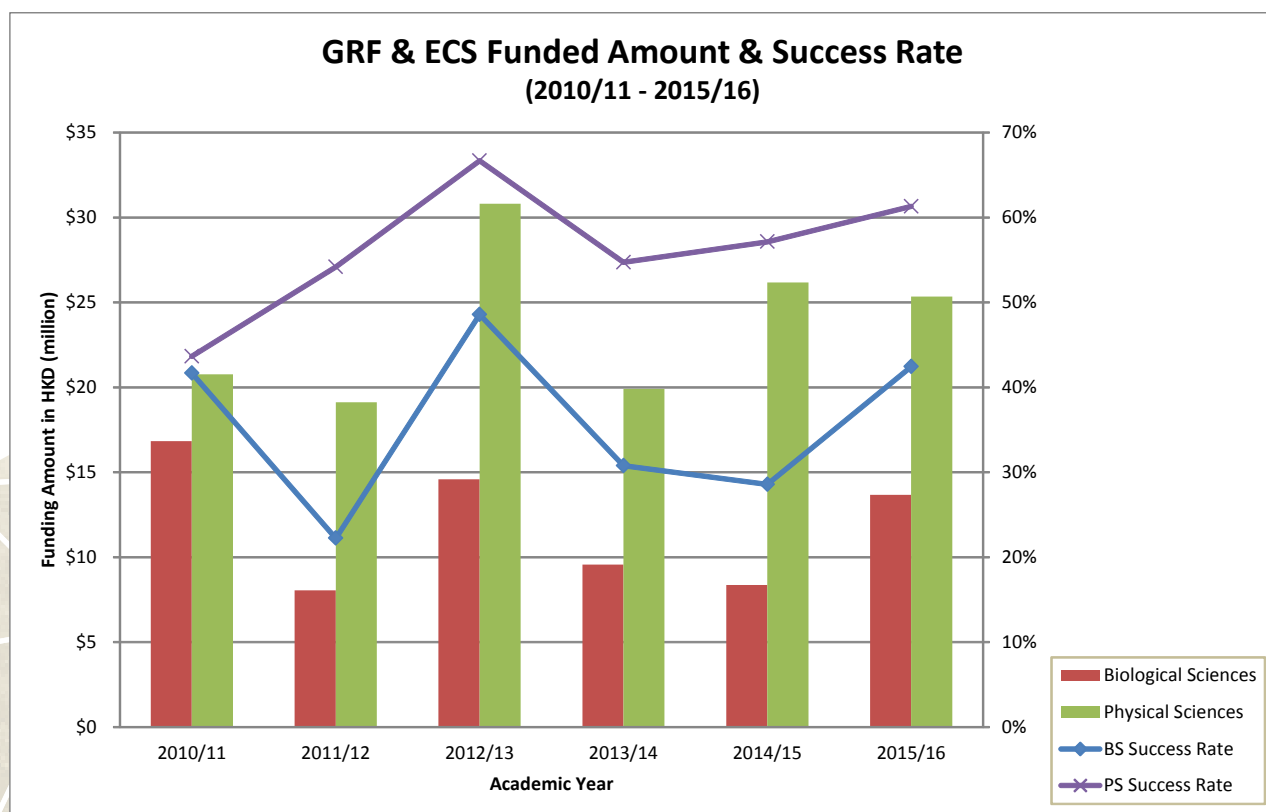
In recent months, a number of competitive external research grants have been obtained by members of the Science Faculty, including the following:

### Innovation and Technology Fund - Innovation and Technology Support Programme

- An Integrated Technology of Simultaneous Visible-Light-Driven Photocatalytic Dye Degradation and Hydrogen Production  
Principal Investigator (PI): Professor Wong Po Keung (Life Sciences)  
Funded Amount: HK\$1.39M
- Development of a Plasma-based Plant Growth Light for Agricultural Use  
PI: Professor Zhong Silin (Life Sciences)  
Funded Amount: HK\$1.46M
- Protein Microarrays with Ultra-low Background for Bioanalysis and Clinical Diagnosis  
PI: Professor Zheng Bo (Chemistry)  
Funded Amount: HK\$1.05M

### General Research Fund and Early Career Scheme 2015-16

In the 2015/16 GRF and ECS funding exercise, the Faculty of Science marked increases in both the success rates under the biological sciences and physical sciences panels by 13.9% and 4.2%, respectively and the overall funded amount had also increased by more than HK\$4.4 million when compared with last year. The chart below shows the GRF & ECS Funded Amount (in HK\$) & Success Rates of the two panels in 2015/16 and the past five years.



## Alumni Affairs

Members of the Physics Alumni Association showed their care to local grass roots on 13 June 2015. The group of volunteers visited a number of families living in subdivided flats during their service trip and lent their ears to those who find everyday life becoming increasingly difficult. Their love towards the ever-changing society is greatly appreciated.



## CALL FOR APPLICATIONS

### WUN Research Development Fund 2015

The Office of Academic Links (OAL) is now inviting applications for the Worldwide Universities Network (WUN) Research Development Fund (RDF) for 2014. The WUN RDF provides one year of seed funds to kick-start research projects under four key areas of research identified as the Global Challenges, and they are as follows:

- Responding to Climate Change
- Public Health (Non-Communicable Disease)
- Global Higher Education and Research
- Understanding Cultures

Application Deadline: **18 September 2015** (Friday) at 5:00p.m.  
For further details, please click [here](#).

### 國家自然科學獎 2016

Deadline: **28 August 2015**

Programme Information:

[BJ-HKAEC webpage](#)

## UPCOMING DATES AND EVENTS

### Monthly Meetings with Dean of Science

All faculties are cordially invited to join the informal staff meetings with the Dean of Science, Professor WONG Nai Ching Henry. Details of the meetings are as follows:

Date	Time	Venue
28 August 2015 (Fri)	15:30 to 16:30	Room G25, Science Centre North Block
25 September 2015 (Fri)		CN Yang Reading Room (Rm. 126), Science Centre North Block
30 October 2015 (Fri)		
27 November 2015 (Fri)		
23 December 2015 (Wed)		

### Inauguration Ceremony 2015

Inauguration Ceremony for Undergraduate Students 2015 will be held on Monday **7 September 2015**, marking the first day of term.

### Orientation Day 2015

Orientation Day for Undergraduate Admissions 2015 will be held on Saturday **24 October 2015**.

## Science Faculty e-Newsletter

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*Mark your  
calendar*

