

## Chemists Online Self-study Award Scheme 2022

(E2CHE0010)

### Introduction

The Chemists Online Self-study Award Scheme (COSAS) 2022 (<https://hkvu.hk/cosas>) is jointly organised by the Hong Kong Virtual University (HKVU) and the Education Bureau. The aim of the Award Scheme is to enhance scientific literacy of senior secondary school students by offering them with more advanced chemistry online lectures. In the 21/22 school year, 26 online seminars will be organised to cover a wide range of chemistry topics, including drinking water treatment, synthetic polymers, gastronomy, nanomaterials and food chemistry, etc. All the seminars were delivered by experts from local universities and chemistry related trades. The contents of the seminars were designed to link with the Chemistry related curricula and further extend the reach to the latest advances in chemistry.

	Seminar Title	Related Topics in the Curricula
Phase 1		
1	Drinking Water Treatment (Cantonese)	Planet Earth; Analytical Chemistry
2	Indoor Air Quality and Indoor Air Quality Certification Scheme (Cantonese)	Analytical Chemistry
3	Air Quality Management Strategies for the Pearl River Delta Region	Analytical Chemistry
4	Water Uptake of Atmospheric Particles: From the Millikan Oil Droplet Experiment to a Blue Sky	Microscopic World II
5	Science and the Aftermath of Fukushima Nuclear Plant Accident (Cantonese)	Microscopic World I
6	Electrochemistry	Redox Reactions, Chemical Cells and Electrolysis
7	The Importance of Water in Food Chemistry	Chemistry of Carbon Compounds
8	Gastronomy (Cantonese)	Chemistry of Carbon Compounds
9	Colour Chemistry	Microscopic World I; Microscopic World II; Materials Chemistry
10	Photodynamic Therapy A Promising Strategy of Cancer Treatment	Materials Chemistry
11	Synthetic Polymers in Modern Life (Cantonese)	Fossil Fuels and Carbon Compounds; Chemistry of Carbon Compounds; Materials Chemistry
12	Metals in Biological Systems	Metals; Chemistry of Carbon Compounds
Phase 2		
13	Food Chemistry and Food Safety	Chemistry of Carbon Compounds
14	Nanomaterials for Environmental and Energy Applications	Materials Chemistry
15	Molecules for Liquid Crystals Displays	Fossil Fuels and Carbon Compounds; Chemistry of Carbon Compounds; Materials Chemistry
16	Conducting Polymers	Fossil Fuels and Carbon Compounds; Chemistry of Carbon Compounds; Materials Chemistry
17	Display and lighting technologies - LCD, LED and OLED	Materials Chemistry
18	Chemistry and Material Science in our Daily Lives	Materials Chemistry (Cantonese)
19	From senior secondary level redox concept to the appreciation of the beauty of Chemistry	Redox Reactions, Chemical Cells and Electrolysis
20	Drug Discovery and Organic Chemistry (Cantonese and English)	Chemistry of Carbon Compounds
21	Symmetry, Asymmetry and Our Chiral World A Personal Recollection of the 2001 Nobel Prize in Chemistry	Chemistry of Carbon Compounds

22	A Journey to the Structural Determination of Organic Molecules: IR, MS and NMR Spectroscopy	Analytical Chemistry
23	Instrumental Analysis of Food and Drugs (Cantonese)	Analytical Chemistry
24	Determination of Volatile Organic Compounds	Fossil Fuels and Carbon Compounds; Chemistry of Carbon Compounds
25	Chemistry in the Service of Mankind (Cantonese)	Fossil Fuels and Carbon Compounds; Chemistry of Carbon Compounds
26	New Definitions of SI units (Cantonese)	Analytical Chemistry

The seminars will be released in 2 batches. The first and the second batches will be released on 15 December 2021 and 1 April 2022 respectively. The whole award scheme will be completed on 31 August 2022.

## Programme Type / Level

Online Learning Programme in Science ([Non Token-required](#))

## Target Participants

- S1 to S6 HKAGE student members
- \* *First-come-first-served.*

## Medium of Instruction

Cantonese and English

## Certificate

Criteria for the awards

To accomplish the assigned tasks for one seminar, students are expected to: - study the pre-seminar material which explains some of the chemistry knowledge and concepts involved in the seminar - attend the online seminar - complete the online assessment items

The following awards will be given to the participating students:

Award	Number of seminars completed within the designated period
Bronze	3
Silver	6
Gold	9
Platinum	12
Diamond	18

Certificates in electronic version will be awarded accordingly.

## Duration

78 hours

## System Requirement

Students are recommended to use Chrome, Firefox, IE, Edge; which is supported Adobe Flash Player (use Flash Player 22 to play animations or videos); are not recommended to use tablet and Smartphone, for example: IOS Devices (Apple iPhone, iPad, etc.), Android Devices; the system or browser which is not supported Adobe Flash Player.

## Application Deadline

**15 Dec 2021, 12:00 n.n**

**Application Result Release Date**

**17 Dec 2021**

## Remarks

The seminars will be disseminated through an e-Learning Open Platform (URL: <http://hkvu.hk/cosas>) developed and hosted by the HKVU. The participating students will receive an email from the HKVU, and students are required to register an account to access and attend the seminars online and to engage in the online exercises.

## Enquiries

For enquiries, please contact us on 3940 0101 or email at [programme@hkage.org.hk](mailto:programme@hkage.org.hk).