

Chemistry Olympiad Exposure Camp HBCSE-TIFR February 02-05, 2022

As a part of Indian National Chemistry Olympiad Programme (INChO), the Olympiad Exposure Camp 2022 (Online) for chemistry teachers teaching at secondary and higher secondary level was organized by HBCSE from Feb 02-05, 2022. A total of 11 teachers from different parts of India attended this camp.

The camp consisted of theoretical and experimental sessions. These sessions included a) pedagogical reflections regarding problem solving and discussion of past INChO problems b) design and assessment of experimental problems c) framing multiple choice questions and d) showcasing materials developed by HBCSE and curated websites for teaching and learning of chemistry: <https://chem.hbcse.tifr.res.in/resources/>.

The theoretical problem solving sessions in the camp involved discussion and solving problems selected from past Indian National Chemistry Olympiad (INChO) examinations. a) chemistry of Ethephon, a common agrochemical used to improve the red colour of apples and promote fruit maturity: <https://olympiads.hbcse.tifr.res.in/wp-content/uploads/ino20/INChO2020-Questions-en.pdf> (problem-3) b) Hydrogen Bonding and Water of Crystallization, based on how water molecules play an important role in crystalline solids: <https://olympiads.hbcse.tifr.res.in/olympiads/wp-content/uploads/2017/09/INChO2018-Question.pdf> (problem 3) and c) Towards a new Metallurgy from e-waste, which focused on the chemical processes which can be used in the recycling of e-waste: <https://olympiads.hbcse.tifr.res.in/wp-content/uploads/ino20/INChO2020-Questions-en.pdf> (problem-2).

The experimental problems in the camp dealt with a) qualitative analysis of unknown salt solutions and b) synthesis of Dibenzalacetone, a common ingredient of sunscreen lotions: <https://chem.hbcse.tifr.res.in/resources/resources-by-hbcse/experiments/>. The first experiment focused on using chemical knowledge of common reactions between aqueous salt solutions to identify nine unknown solutions by mutual reactions. The second experiment discussed synthesis of dibenzalacetone including the usefulness of designing pre-lab and post-lab questions. The primary aim of these sessions was to conduct discussions on design of experiments, key concepts and understanding the procedure steps. The videos of some key steps in the procedure were shown.

Overall, the sessions at the camp highlighted significance of teaching-learning process at the higher secondary school level.

