

CSO 203

Tutorial 3

1. What are the strategies to develop a catalyst that efficiently catalyze water oxidation?
2. The oxygen transport in invertebrates is carried out by hemocyanin, a copper-based protein. How does its mechanism differ from that of hemoglobin?
3. Design an experiment to determine the redox state of copper in a metalloprotein using spectroscopic techniques. Which techniques would you select and why?
4. How do synthetic Mn-based model complexes help us understand the mechanism of water oxidation in PS-II?
5. Why is the Oxygen-Evolving Complex (OEC) important in PS-II? Which metals are found in the OEC, and what function do they serve?
6. What is the difference between I₂M and WNA mechanism? Which one is favourable in the biological systems?
7. How do chelating agents work in the treatment of metal poisoning? Give an example of one such agent.
8. Explain how the platinum complex cisplatin functions as an anticancer agent. What makes it effective?
9. Why was KI added during the synthesis of cisplatin?