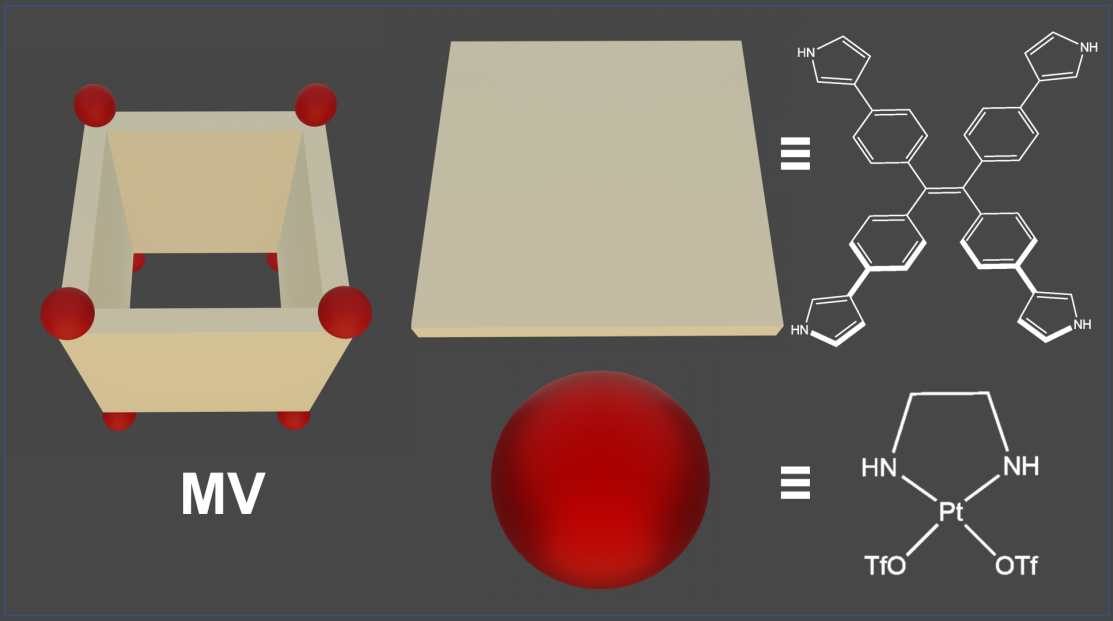
A Case of Catalysis

Elementary Problem 3 - 10 points

Deadline: August 24th at 8:30 PM IST

A developing area of supramolecular chemistry focuses on synthesis of molecular vessels that can encapsulate molecules and can simultaneously catalyze their reactions. One such molecular vessel is MV with aromatic ligands walls and metal acceptors at the corners.



To investigate its catalytic activity in Diels-Alder reaction, anthracene was reacted with two molecules (A) and (B) and the yields in presence and absence of MV were recorded.

Explain the difference in yield (two **distinct** reasons for full credit) between reactions (i) and (iii) and provide a logical sequence of reasoning as to why the presence of MV is the main reason for this discrepancy.