
Defence Seminar

Seminar Title	: Vicinal Diols as a C2 Precursor in N & O-Containing Heteroaryl Synthesis
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Venue	: Seminar Room, Department of Chemistry
Date and Time	: 04 Apr 2025 (4.00 PM)
Abstract	: Vicinal diols possess unique properties, making them valuable in various fields. They're employed as anti-corrosion agents, lubricants, surfactants, and precursors for polyurethanes and epoxy resins. Vicinal diols are extensively used in organic synthesis as a polar solvent and also as a reagent. Vicinal diols are often used as a protecting agent for carbonyl compounds. Oxidative cleavage of vicinal diols gives carbonyl compounds and hence vicinal diols can be used as a C1 precursor in organic synthesis. On the other hand, utilization of the consecutive hydroxyl group leads to dioxanes. Further, selective oxidation of diol may form α -hydroxy carbonyl compounds, which could serve as a C2-precursor in synthesizing various structural motifs. The current thesis describes the utilization of vicinal diols, such as ethylene glycol and propylene glycol, as a C2 precursor in the synthesis of various heteroaryls in the presence of oxidants.