

Registration Seminar

Seminar Title	: Electrochemical C-H Functionalization of Heterocycles
Speaker	: Swayamprava Swain (Rollno : 522cy3015)
Supervisor	: Prof. Niranjana Panda
Venue	: Seminar Room, Department of Chemistry
Date and Time	: 22 Jan 2025 (11.00 AM)
Abstract	: Towards the development of sustainable eco-friendly methods for performing organic transformations, using electricity both as oxidant and reductant has served as a viable alternative to traditional techniques that depend on transition-metal catalysts and oxidants. Notably, the electrochemical synthesis consumes minimal electricity (in the range of milli ampere) for the reaction without producing stoichiometric wastes. Direct thiocyanation of 4-arylthiazol-2-one was performed by an electrochemical process using ammonium thiocyanate as the thiocyanating agent at room temperature without any supportive electrolyte. From control experiments, it is clear that the reaction proceeds through a radical pathway. A similar process was also employed for the C5-halogenation of 4-arylthiazol-2-one using ammonium halides as the halogen sources. Further, the thiocyanated 4-thiazol-2-ones were transformed to sulfenated derivatives.