

2025-1학기

# 화학과 Colloquium Seminar



## Atomically Dispersed Metal Catalysts Steering Selective Electrocatalysis

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○ 일시 : 2025. 06. 05. (목) 16:00

○ 장소 : 5호관 506호

### ○ 초록

Electrocatalysis is a key driver in promoting the paradigm shift from the current fossil-fuel-based hydrocarbon economy to a renewable-energy-driven hydrogen economy. The success of electrocatalysis hinges primarily on achieving high catalytic selectivity along with maximum activity and sustained longevity. Important electrocatalytic energy conversion reactions are often constrained by the scaling relationship, which sets the intrinsic limitation in designing highly selective and active electrocatalysts. In this seminar, our group's efforts to design new electrocatalytic materials that can break the scaling relationship will be presented. Notable examples include atomically dispersed metals, intermetallic compounds, and interstitial compounds, which are designed to promote selective electrocatalysis of oxygen reduction and evolution reaction (ORR and OER), hydrogen peroxide ( $H_2O_2$ ) production, and chlorine evolution reaction (CER).

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