

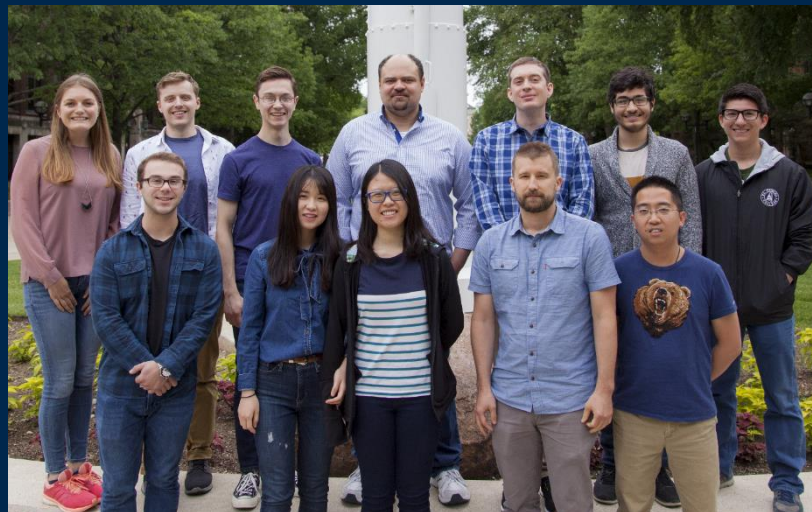
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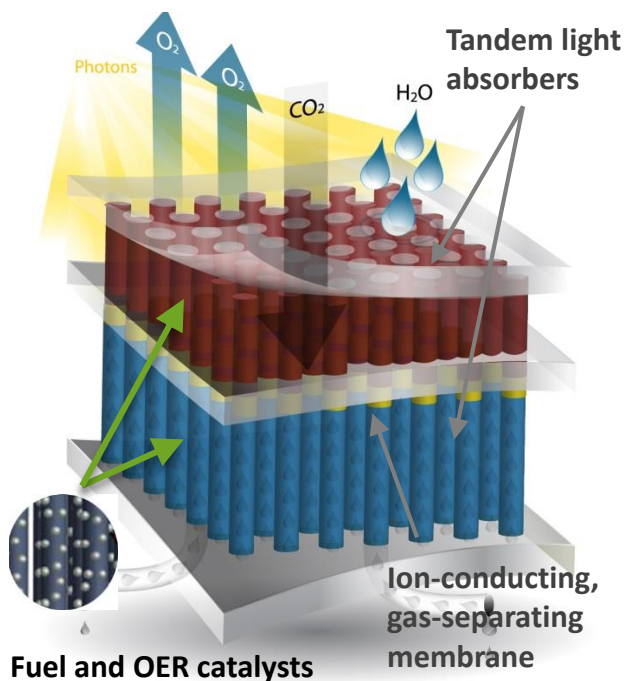
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Electrocatalysis for Energy and Environmental Chemistry

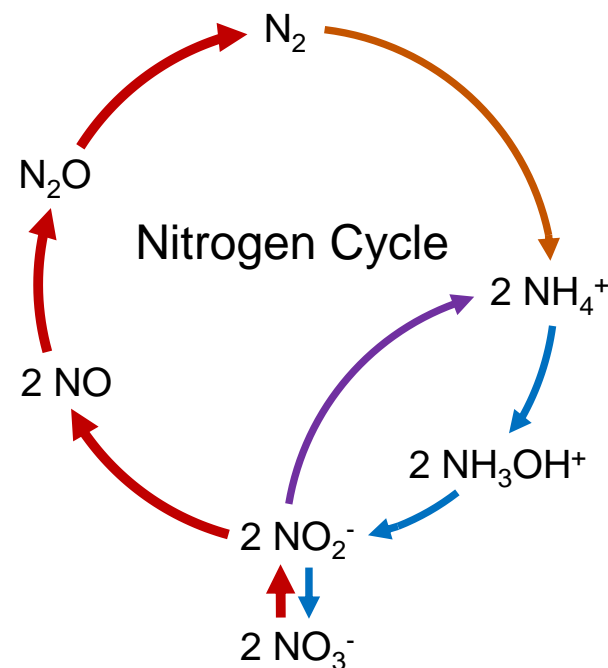


**Carbon Dioxide Reduction
Reaction (CO₂RR)**

**Electrochemical Water
Splitting (HER and OER)**

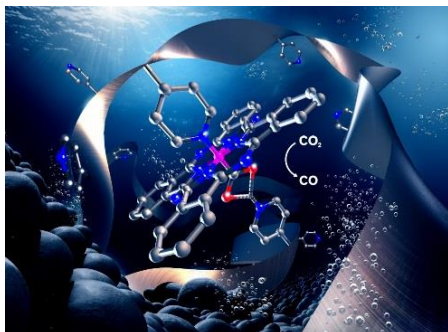
**Electrochemical
Denitrification of
Wastewater**

**Electrochemical
Ammonia Synthesis**

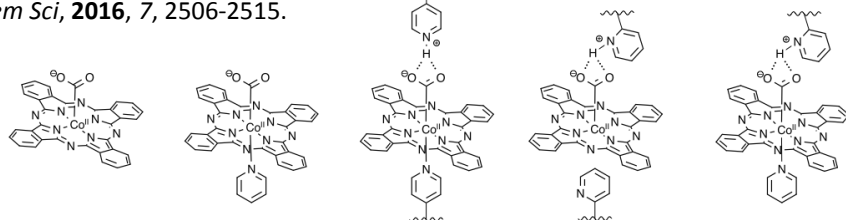
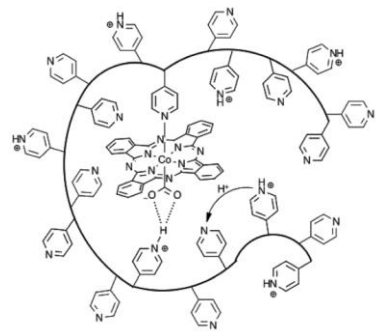


Research in the McCrory Lab

Polymer-Encapsulated Catalysts for CO₂RR



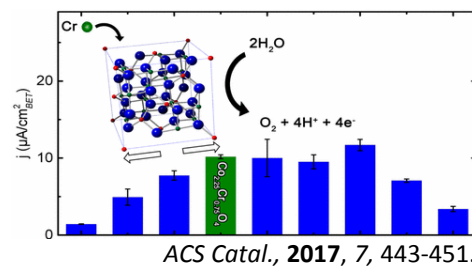
Chem Sci, **2016**, *7*, 2506-2515.



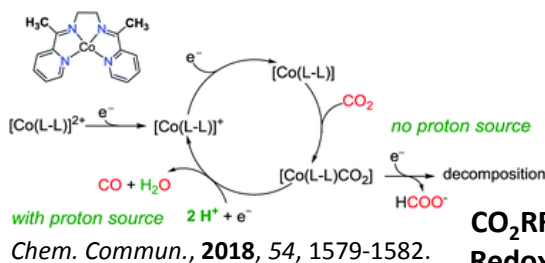
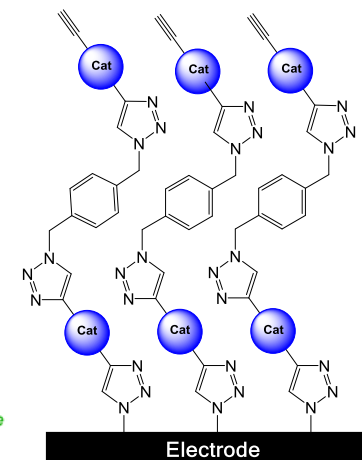
	36 ± 7%	68 ± 3%	89 ± 3%	73 ± 8%	83 ± 5%
ϵ_{CO}					
TOF_{CO}	0.6 ± 0.3 s ⁻¹	1.6 ± 1.0 s ⁻¹	4.8 ± 0.6 s ⁻¹	0.8 ± 0.2 s ⁻¹	4.2 ± 0.7 s ⁻¹

Developing New Electrocatalytic Systems

Oxygen Evolution with Ternary Oxide Electrocatalysts



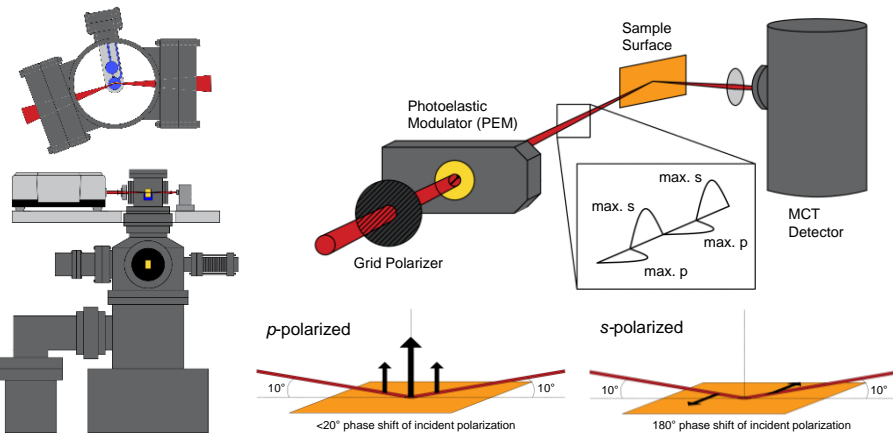
Layer-by-Layer Growth of Molecular Catalyst Films



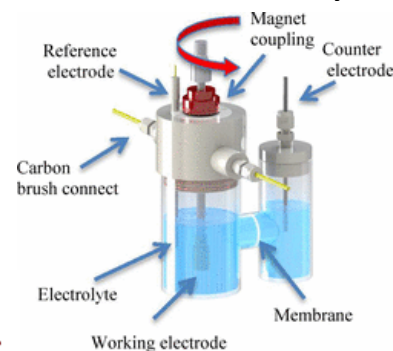
CO₂RR Catalysts with Redox-Active Ligands

Developing Electroanalytical Instrumentation and Methods

Spectroelectrochemical Surface Science Apparatus (SEC-SSA) and *in situ* PM-IRRAS



Hermetically Sealed Rotating Disk Voltammetry



Anal. Chem., **2017**, *89*, 581-585.

High-Pressure Electrochemistry



Electrocatalysis, **2016**, *7*, 87-96.