

## Promoting Renewable Energy Conversion Electrocatalysis by Atomically Dispersed Catalysts

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“Hydrogen economy” is considered as a long-term solution for securing our energy future. A key element for realizing this compelling vision is the development of highly active, durable, and low-cost electrocatalysts for energy conversion reactions, such as fuel cells and electrolyzers. Our group has endeavored to design and prepare new electrocatalysts for energy conversion reactions, including oxygen reduction reaction, H<sub>2</sub>O<sub>2</sub> production, oxygen evolution reaction, chlorine evolution reaction, and hydrogen evolution reaction, through the understanding of active sites for enhancing their activity, selectivity, and durability. On the other hand, atomically dispersed catalysts or single-atom catalysts have been actively pursued recently to maximize the utilization efficiency of metal species and exploit unusual reaction activity and selectivity. In this talk, I will present our recent efforts toward design of atomically dispersed catalysts for energy conversion reactions and their promotional effects on catalytic activity and selectivity.