東京大学グローバルCOEプログラム　機械システム・イノベーション国際拠点

東京大学 THE UNIVERSITY OF TOKYO

GMSI Global Center of Excellence for Mechanical Systems Innovation

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Shape and Composition-Controlled Metallic Nanoparticles for Catalytic Applications

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要旨

We are controlling shape and composition of metal nanocrystals to develop catalysts with Improved activity, selectivity, and durability. Atomic arrangement on the surface is changed by controlling the shape of metal nanocrystal. Since most of the chemical reaction occurs via chemical adsorption of reactants on the catalyst surface, change in atomic arrangement can cause a large difference in catalytic activity and selectivity. This effect can be shown clearly in various gas-phase, solution-phase, and electrocatalytic reactions. Combining with control in composition, novel fuel cell electrocatalysts with better catalytic properties have been developed in our lab.

主催：　東京大学グローバルCOEプログラム「機械システム・イノベーション国際拠点」
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