GS TECHNICAL INFORMATION

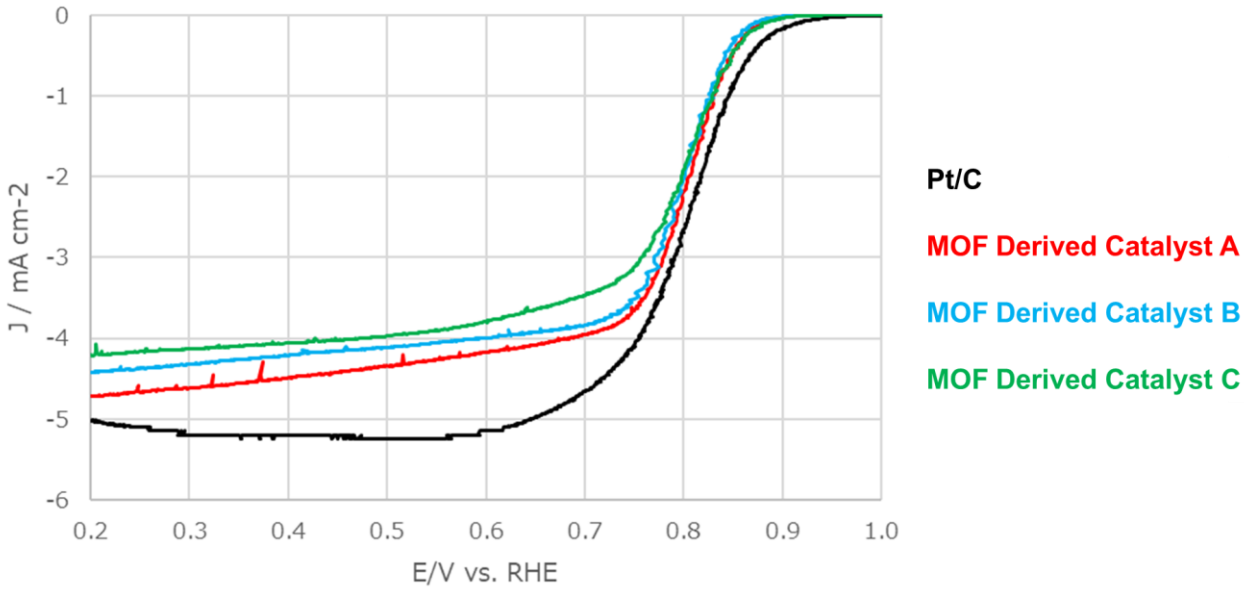
Platinum based Catalyst Replacement, Platinum Free Catalyst

MOF (Metal Organic Framework), PCP (Porous Coordination Polymer) derived Catalyst

Catalyst for Fuel Cell, Metal Air Battery Electrode

We have developed MOF derived catalyst which could be potentially replaced with platinum catalyst. Our MOF derived catalyst possess high oxygen reduction activity without using any expensive platinum so that polymer electrolyte fuel cell (PEFC), metal air battery can be manufactured with cheaper cost. Following experimental results present that our MOF derived catalyst can be comparable to Pt based catalyst even the efficiency is still lower. We will keep challenge to chase for higher efficiency.

Please consult with us including any technical detail anytime.



Electrochemical properties of MOF derived catalyst compared with commercially available Pt loaded carbon catalyst measured with rotation disk electrode.

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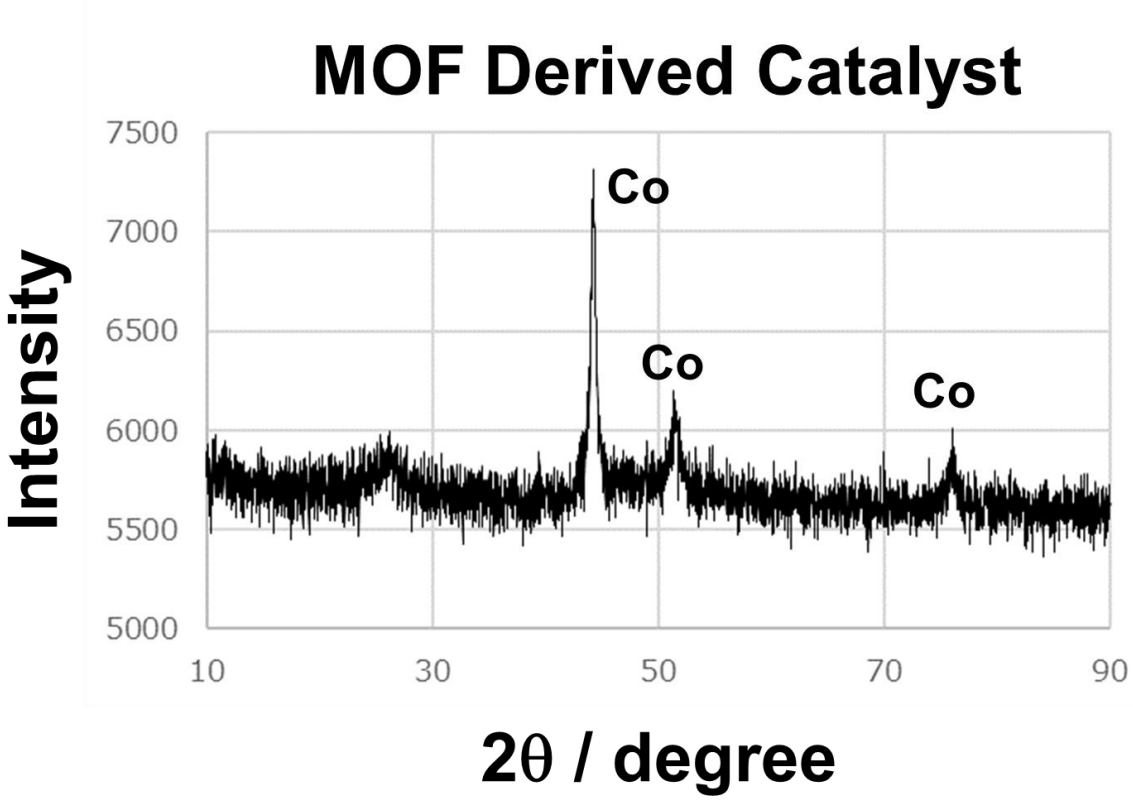
Electron transfer numbers estimated from electrochemical properties of (LSV : Linear Sweep Voltammetry) measured with rotation disk electrode.			
MOF Derived Catalyst A	**MOF Derived Catalyst B**	**MOF Derived Catalyst C**	**Pt/C**
3.2 - 3.4	**3.4 – 3.6**	**3.5 – 3.8**	**4.0**



Catalytic activity of our MOF derived catalyst is a little lower than commercially available Pt loaded carbon catalyst although it has large advantage in terms of cost. We will further challenge to reach higher catalytic activity.

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