

Battery Materials and Fuel Cell Catalysts Investigated by Solid-state NMR

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Li batteries and fuel cells have been developed for more efficient energy usage than burning fossil fuel and contributed to reservation of our environment. Although Li batteries and fuel cells are available these days, there are still much room to improve their efficiency by understanding fundamental electrochemical mechanism as well as the relationship between chemical and electronic structures of component materials and battery or cell efficiency.

In this presentation, the solid-state NMR results of Li battery cathode materials prepared differently are compared. In addition, the results of nano-size Pt black and Pt supported on carbon black, commonly used for catalysts especially in fuel cells, are discussed.