

(Direct) Alcohol Fuel Cells Amending Battery Capabilities

*Fraunhofer-Institute for Chemical Technology
Department of Applied Electrochemistry
Joseph-von-Fraunhofer-Str. 7, 76327 Pfinztal, Germany
Dr. Carsten Cremers*

Pfinztal, the 13th of November 2009

In many cases batteries are good solutions to satisfy the basic demands for electrical energy supply of most portable and mobile applications in industrialised countries. However, particular demands to high energy density for long operating times cannot be fully satisfied with batteries without substantial risks to the safety of the appliance. Here the combination with fuel cells, in particular such fuel cells running by direct conversion of a liquid alcohol as fuel, provide substantial advantages compared to solutions basing solely on batteries. The department for Applied Electrochemistry of the Fraunhofer Institute for Chemical Technology is engaged in the development of state of the art materials for all relevant low temperature direct alcohol fuel cell technologies:

- electro catalysts and membrane electrode assemblies for direct ethanol fuel cells
- electro catalysts and membrane electrode assemblies for anion exchange membrane direct ethanol or ethylene glycol fuel cells
- membranes and membrane electrode assemblies for high temperature polymer electrolyte membrane fuel cells
- bipolar plates

In combination with its excellent expertise in battery technology, which will also be shown on Battery Japan, Fraunhofer ICT is able to support your development of battery fuel cell hybrid solutions for your application.

For more information please contact our Public Relation Manger, Ms. Karolina Hladik karolina.hladik@ict.fraunhofer.de, phone +49-721-4640-222