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## Performance of a prototype multi-stack fuel cell system in an electrical series configuration

Reiko Ohara, Ya Yi Hsu, Ming Tao Hu, Chun Han Li, Fu Pin Ting and Wen Sheng Chang  
Industrial Technology Research Institute, Taiwan (ROC)

The performance of a prototype multi-stack proton exchange membrane fuel cell (PEMFC) system (i.e., a two-fuel cell system) implemented in an electrical series configuration was investigated. In the present study, fuel and oxidant supply subsystems combined with a microcontroller unit can optimize their function to achieve two 5 kW fuel cell systems. A temperature control subsystem was developed to independently control the temperature of the multi-stack fuel cell system. The performance of each PEMFC system was also examined. The results show a good consistency of the output voltage for the two 5 kW fuel cell systems. The total power output of the electrical series system is 10.1 kW at 140 A, 60°C; that is, the power density is 8.3 W/L.

### Biography

Reiko Ohara has her research interest in Chemical Analysis, Biochemical Analysis and Electrochemistry for a range of applications in the wafer surface treatment and endocrine disrupting chemicals measurements. She used to work as an Organic and Biological Analyst at the Japan Investigation Institute for ten years. Since 2001, she has been working at Industrial Technology Research Institute, Taiwan, focusing on the development of biosensors and hydrogen storage Mg-Ni alloys. Her current research focuses on Fuel Cells.

RKOhara@itri.org.tw

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