Overall Objectives and Budget
It is one of the national high-tech projects by Most of China. The first skid container type 50Nm³/hH₂ electrolyser is developed to provide hydrogen supply and finish demonstration at the Beijing Hydrogen Station, China. The budget is 3.0M RMB.

Technical Barriers and Targets
The asbestos membrane which is used in old type electrolyser is poisonous.
Lower current density and higher power consumption.
Old process leads to the large size of electrolysis system.

Technical Accomplishments / Progress / Results
Research and develop new type electrode assembly which can make the current density reach 2800A/m², and the DC power consumption lower to 4.5 kWh/Nm³H₂.
Membrane used in the electrolyser is non-asbestos.
Design new process to minimize the devise size and volume.

Future Work
Optimize small box type alkaline water electrolysis system.
Develop next generation small SPE water electrolysis system.
Develop skid container type integration system including water electrolysis, hydrogen purification, compression, storage and refueling.

Conclusions and Major Findings
The first skid container type 50Nm³/hH₂ electrolyser is developed. This equipment is set up in the Beijing Hydrogen Refuelling Station which is the first station in China and provided hydrogen supply for fuel cell buses of Beijing Olympic Game demonstration project.

Project Overview
- Meng Qingyun - Beijing PERIC Hydrogen Technologies Co., Ltd - Add: Suite B-205, 2 Building, NO.16 Downing Lake Community, Zhongguancun East Road, Haidian District, Beijing, PR China 100083, Tel: 0086-10-82169790 Fax: 0086-10-82169814, E-mail: peric_hydrogen@163.com
- Ministry of Science and Technology(Most) of China, Beijing Peric Hydrogen Technologies Co., Ltd, The 718th Research Institute of CSIC
- May, 2008 to December, 2013
- www.peric.ac.cn