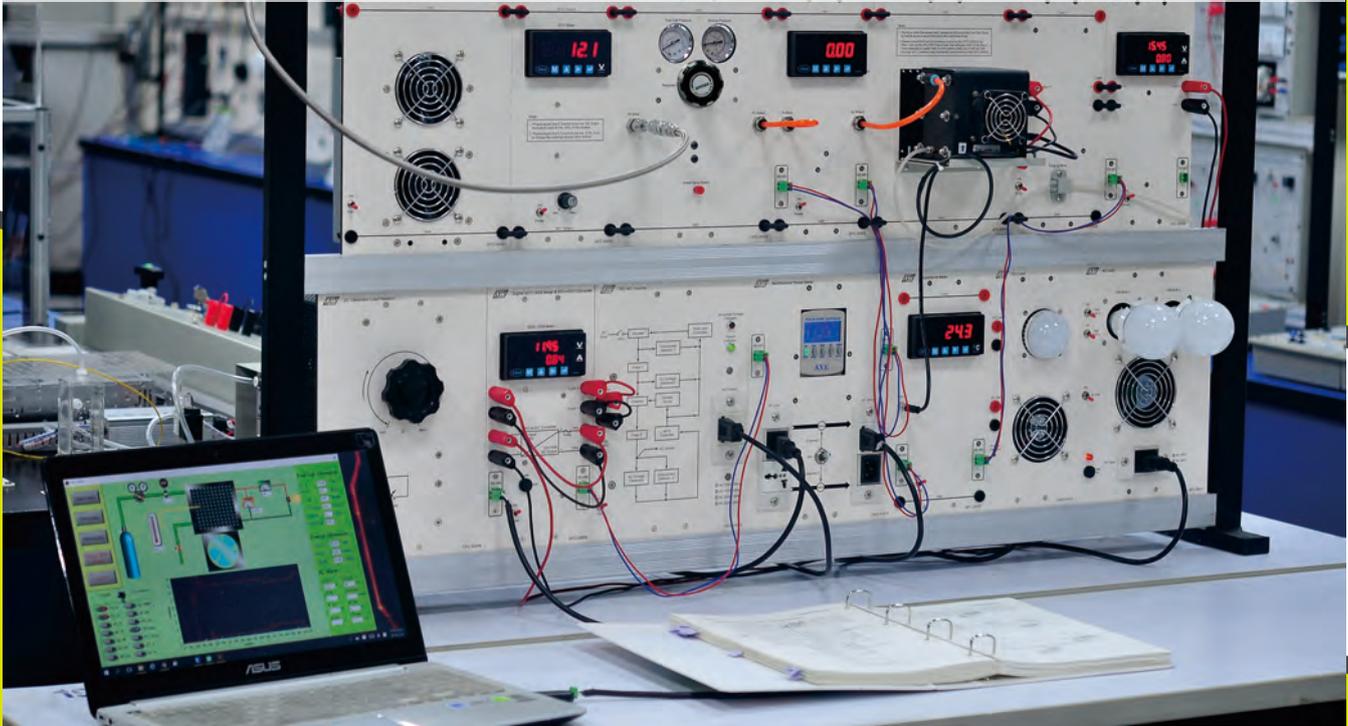
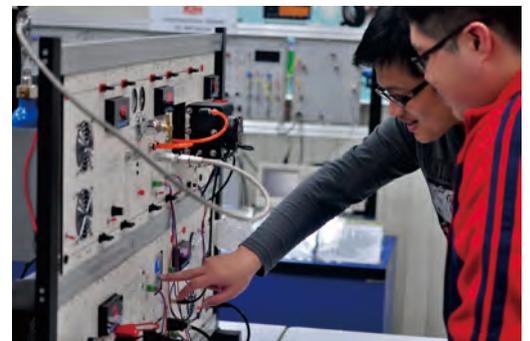


PEM Fuel Cell Hybrid Training System GFC-3100

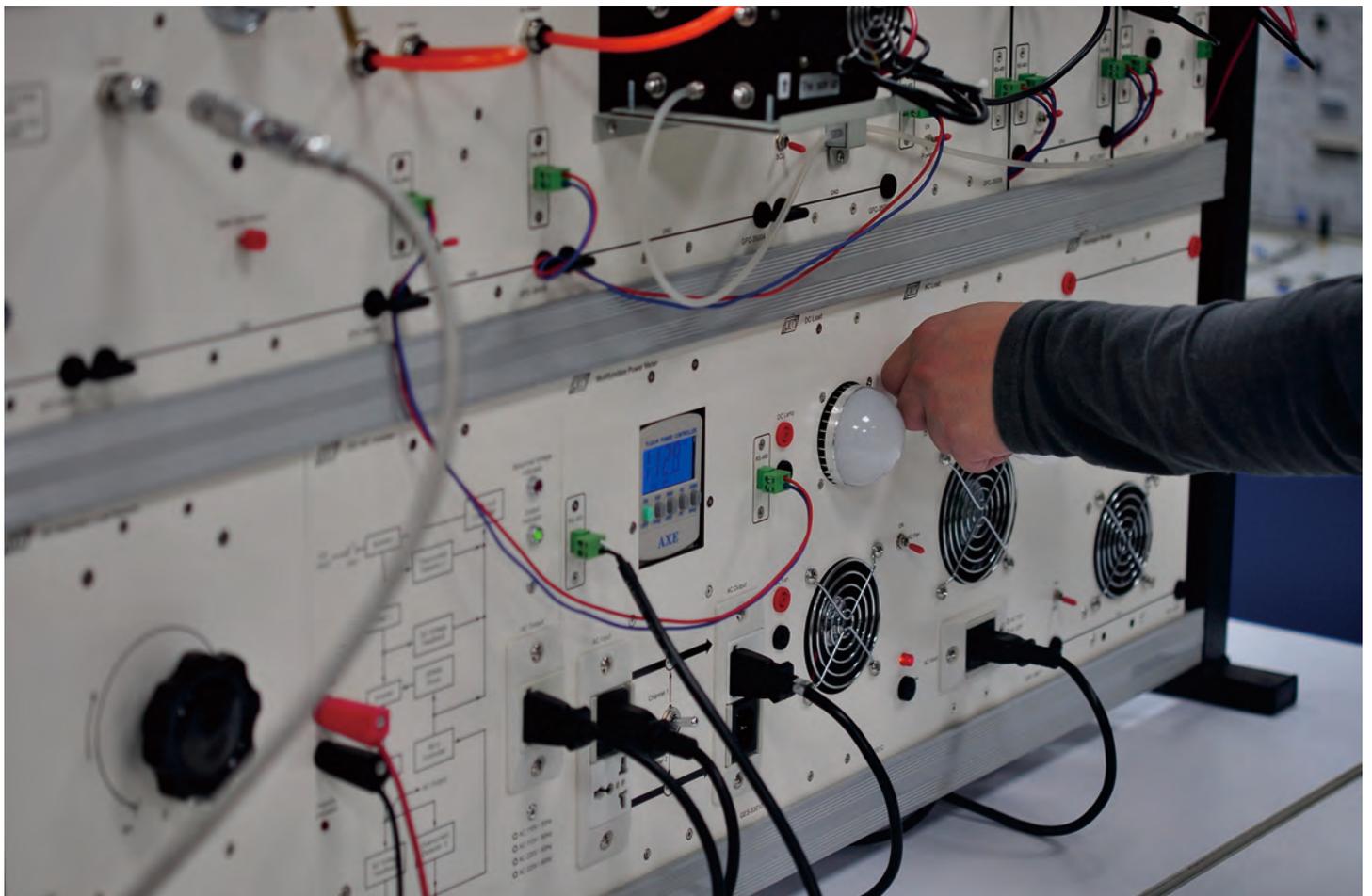
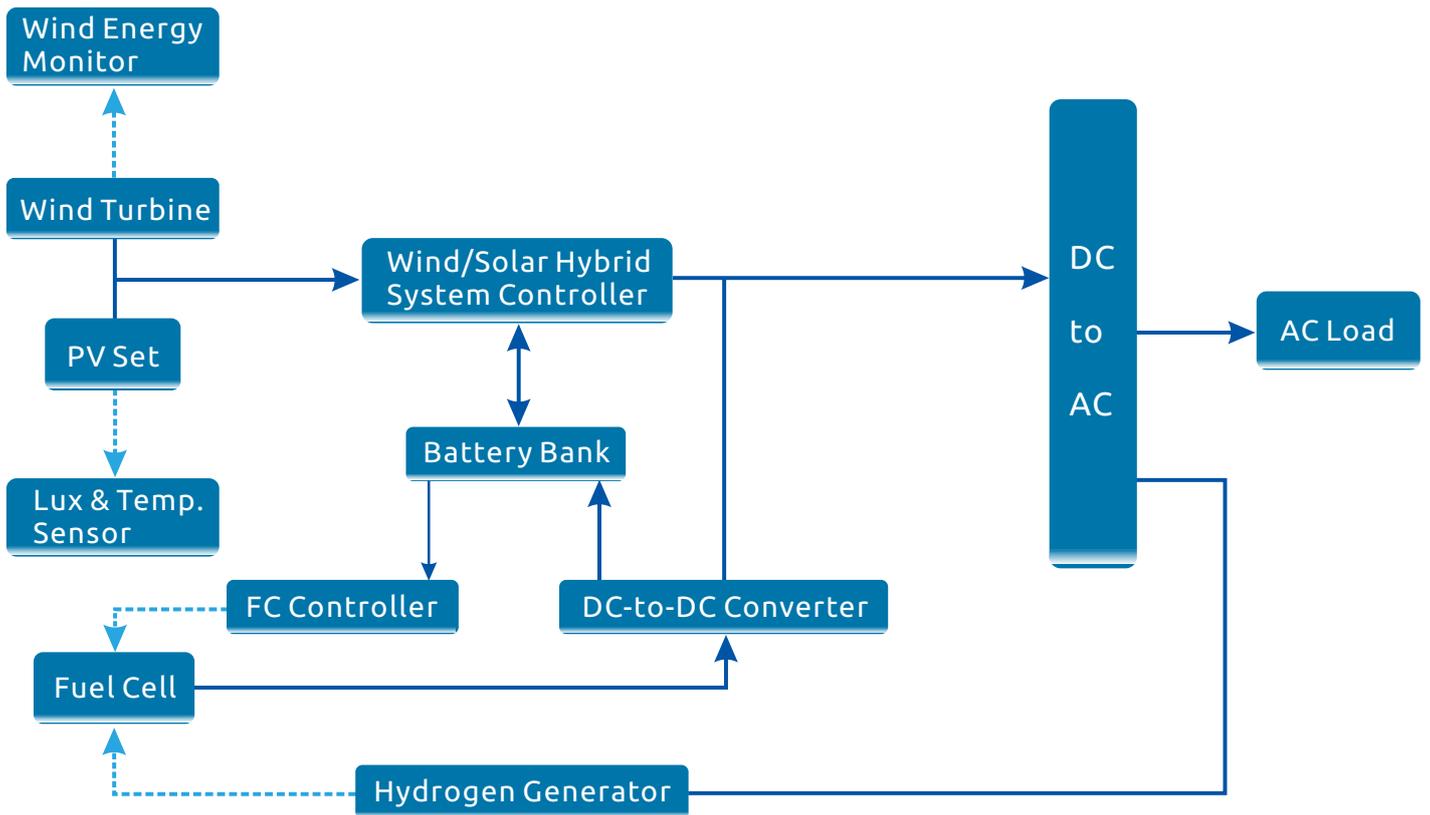


The major topics of GFC-3100 training system include the performance optimization, the energy conversion efficiency of a hydrogen PEM fuel cell, as well as the integration and applications of hydrogen PEM fuel cell technology.



Hybrid Training System

Integrating GFC-3100 PEM Fuel Cell Hybrid Training System and GES-500 Wind and Solar Hybrid System, mixed application of the green energy power generating system can be made, resolving the problems from discontinuous power, which is caused by insufficient wind and solar power. It makes the power generating network more complete and perfect.



The principle of a hydrogen PEM fuel cell is to use a proton exchange membrane to generate electricity through an electrochemical reaction between hydrogen and oxygen. The advantage of the hydrogen PEM fuel cell technology is the high efficiency of electricity generation. The only byproducts from the fuel cell are heat and water, which would not pose any threat to the environment. It meets today's environmental requirements.

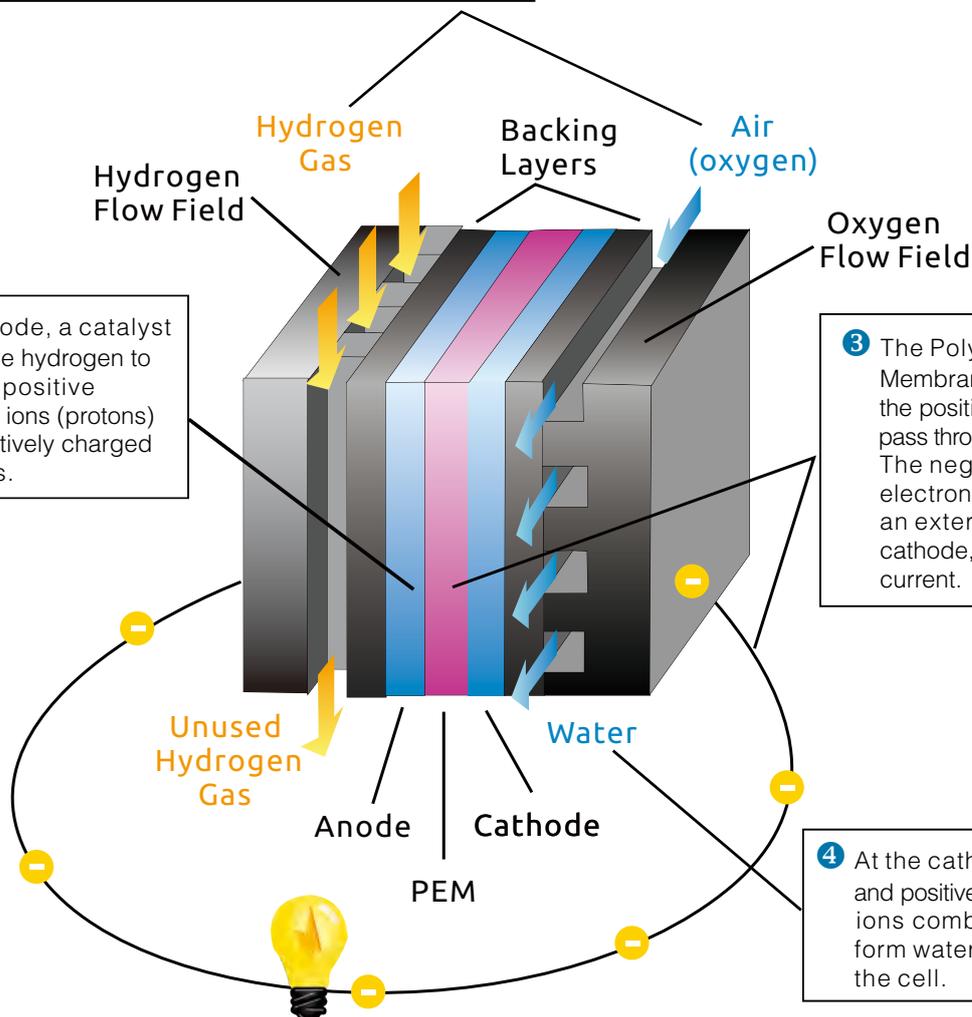


1 Hydrogen fuel is channeled through field flow plates to the anode on one side of the fuel cell, while oxygen from the air is channeled to the cathode on the other side of the cell.

2 At the anode, a catalyst causes the hydrogen to split into positive hydrogen ions (protons) and negatively charged electrons.

3 The Polymer Electrolyte Membrane (PEM) allows only the positively charged ions to pass through it to the cathode. The negatively charged electrons must travel along an external circuit to the cathode, crating an electrical current.

4 At the cathode, the electrons and positively charged hydrogen ions combine with oxygen to form water, which flows out of the cell.



System Features

1. Flexible and modular design system
2. A specific fuel-cell database provided for learning and R&D application
3. Real-time operation status of the system can be observed using a digital meter
4. Safety plugs are equipped with all the input and output terminals for the purpose of safe connection during experiments.
5. Polarity reversal protection is provided to prevent damage from reverse polarity of the supply voltage.
6. An effective and efficient solution is provided for the fundamental learning of hydrogen PEM fuel cells, the method for storing hydrogen, and related safety norms.

Software Feature - Real-Time Monitoring

1. Communication ports can be detected automatically.
2. Meter data can be read in the data collection area and saved in Excel format
3. The graph function can optional display the curve of meter data.
4. The I-V curve function can display Fuel Cell I-V curve and I-P curve.
5. The software screen can be saved in JPEG format.

