EXPERIMENTAL REPORT ON REPLICATION OF LEC

QIURAN LABORATORY, XI'AN, CHINA

Zhang hang 715469127@qq.Com CHEN Si18090819@qq.com

ABSTRACT:

The lattice energy converter (LEC) phenomenon was discovered by American scientist Frank Gordon working with Harper Whitehouse.. French scientist Jean Paul Biberian, Italian scientist Antonio Di Stefano and Alan Smith in the UK repeated the experiment. Our Qiuran laboratory carried out many experiments and observed the LEC phenomenon. The data we gathered are basically consistent with the data observed by foreign scientists.

Key words, LEC, voltage, co-deposition

1.0 THE EXPERIMENTAL DEVICE.

The reactor is composed of two titanium tubes, both 500mm in length. The outer diameter * wall thickness of the outer tube is 16 * 1.0mm, and the outer diameter of the inner tube * wall thickness is 12 * 1.0. The structure of the reactor is basically the same as that made and used by Dr. Antonio Di Stefano in Italy,

Figure 1. Titanium tube reactor

Because the seals between and at each end of the inner and outer tubes are plastic, so not resistant to high temperatures, we chose to use titanium tubes for its low thermal conductivity. This means when the center of the reactor tube is heated the seal temperature remains low.

Figure 2. Titanium tube reactor with heater and thermocouple

1.1. CO-DEPOSITION METHOD.

The thickness of the iron/hydrogen co-deposition layer is about 100 μM. Electrolyte was prepared by dissolving 300g ferrous chloride in 1000ml. of water. The electroplating current is 50-290 Ma, and the electroplating time is 48 hours. Hydrogen bubbling could be seen at the surface of the cathode. The inner titanium tube from the reactor was the cathode and the anode was iron wrapped in glass-clothto provide electrical insulation against direct contact. The two titanium tubes were assembled after electrolysis was complete, and the insulation checked. No voltage was seen initially at room temperature.

Fig. 3. Electrodeposition of iron and hydrogen (co-deposition)

Fig 4. The surface of the cathode after electrolysis.

Fig. 5. The two reactor tubes are tested for electrical isolation after assembly

Fig. 6. LEC voltage of assembled reactor air is zero at room temperature

1.2. VOLTAGE DETECTION METHOD.

The detection circuit used is basically the same as that of Dr. Antonio Di Stefano's voltage detection circuit. KEITHLEY 2700 data acquisition multimeter is used for the detection instrument. In this experiment, only the voltage is measured, and the parallel resistance is 1Megohm. This parallel resistance is very important. Without this resistance, the detection instrument can't work normally.

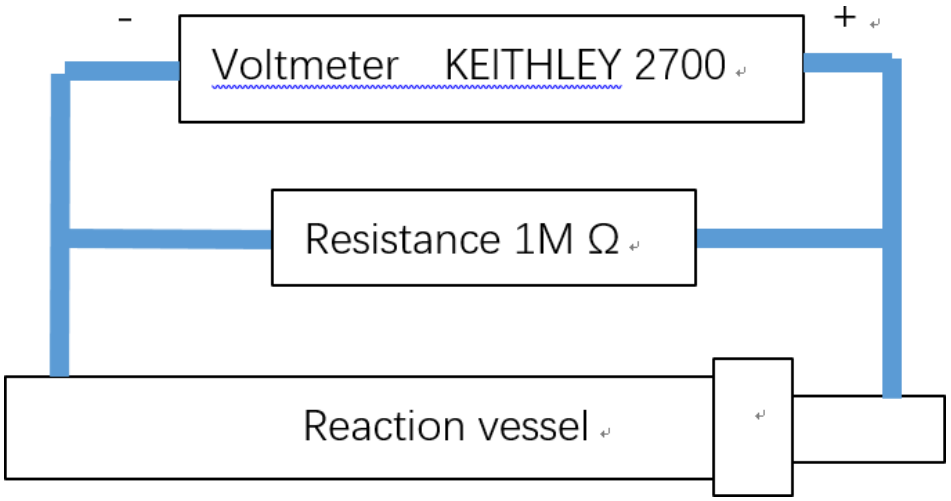


Figure 7. LEC voltage detection circuit diagram

2.0. RESULTS.

The experiment was carried out in air, and the reactor was also filled with air. The initial LEC voltage was zero. The container was heated to 190°C, and after three hours, the LEC voltage suddenly appeared. At this time, the heating was stopped, and the LEC voltage slowly rose to 250 mV, then dropped to 160 mV. The LEC was then heated to 190°C again. After this the LEC voltage rose to 220 mV, then began to drop, and finally the voltage dropped to zero. This is the first LEC voltage peak, and the process lasts about 2 hours. One hour after the first voltage peak disappeared a second peak appeared,

3 hours, and the highest LEC voltage was 10 mV.

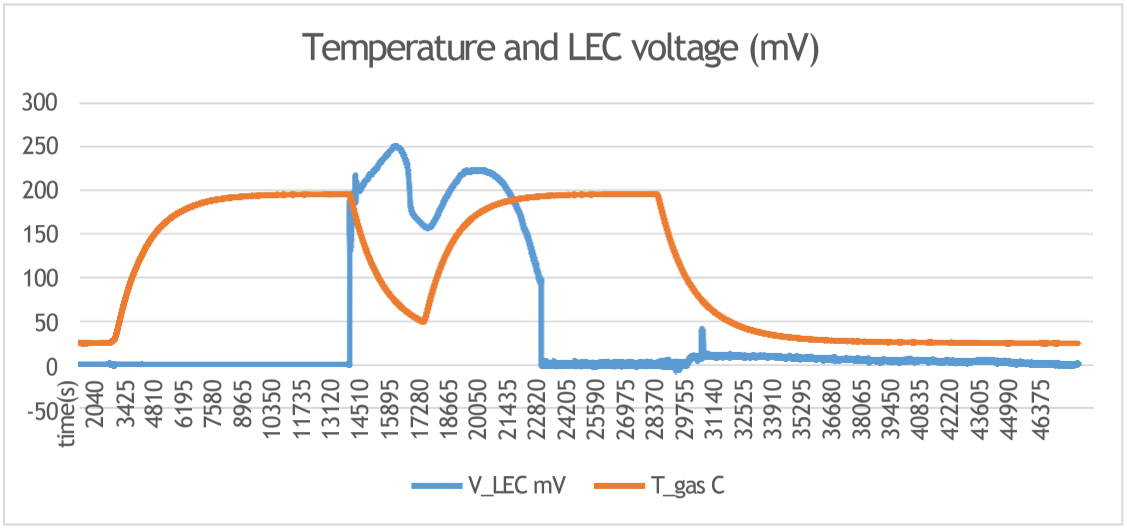


Fig. 8 temperature vs. LEC voltage

3 experimental result

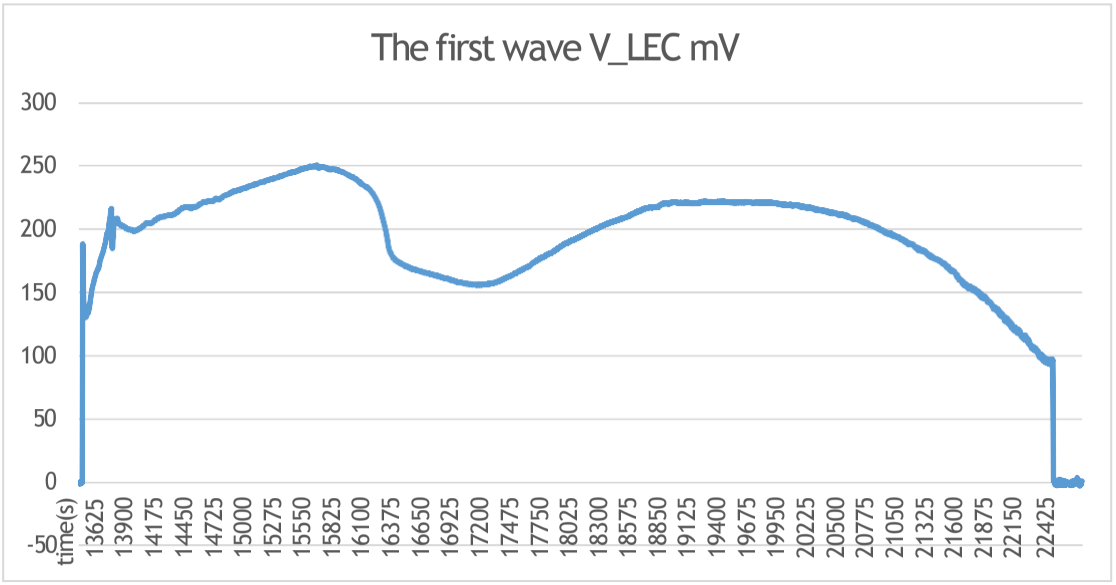
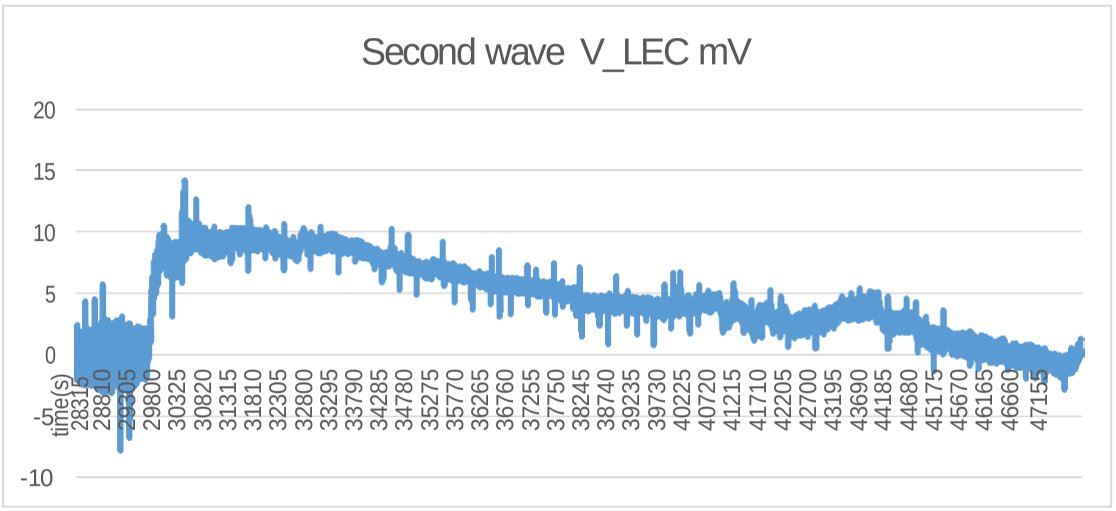


Fig. 9 first wave LEC voltage



4.0 SUMMARY OF FINDINGS.

4.1 LEC voltage can be observed in the air
4.2 The voltage of LEC is unstable in this configuration and can bring surprises..
4.3 LEC voltage is related to temperature.
4.4 Co-deposition of iron and hydrogen is the key step to produce LEC phenomenon.
4.5 Next, LEC experiments in hydrogen and deuterium are prepared.

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