



ECO ENERGY SYSTEM – THE KEY TO A SUSTAINABLE DEVELOPMENT OF OUR PLANET

**ELEONORA PETROVA DALEVA &
DEISLAVA GEORGIEVA NIKOLOVA**

*High School of Mathematics and Natural Science
"Acad.S.P.Koroljov" – Blagoevgrad*

Project Supervisor: **Prof. Mario Mitov, PhD**
*Department of Chemistry,
South-West University "Neofit Rilski" - Blagoevgrad*





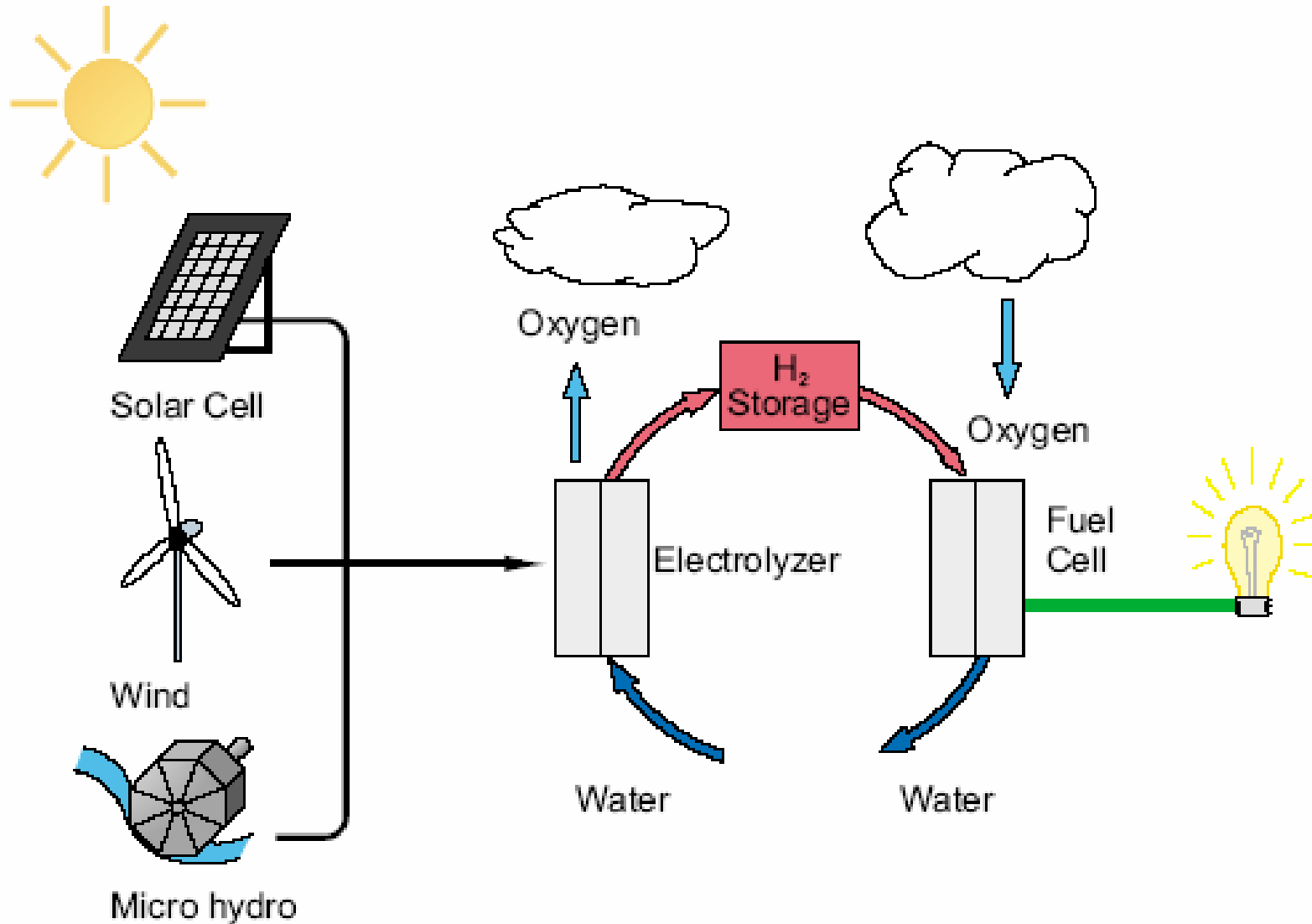
CONCEPT OF HYDROGEN ECONOMY

HYDROGEN AS A FUEL

- The cleanest fuel
 - the only product of its combustion is H_2O
 - no emissions of CO_2
- The highest energy density among all fuels
 - 4.5, 2.9 and 2.6 times higher than that of coal, petroleum and natural gas, respectively



CONCEPT OF HYDROGEN ECONOMY



CONCEPT OF HYDROGEN ECONOMY



-
-
-

CONCEPT OF HYDROGEN ECONOMY

FUEL CELLS



-
-
-

POPULARIZATION OF HYDROGEN ECONOMY

- Is this important?

Yes, it is...

because it is our chance to overcome the near worldwide energy crisis and ecological disaster

-
-
-

POPULARIZATION OF HYDROGEN ECONOMY

- Is this important?

Yes, it is...

because as young people we should be familiar
with modern technologies

-
-
-

POPULARIZATION OF HYDROGEN ECONOMY

- Is this important?

Yes, it is...

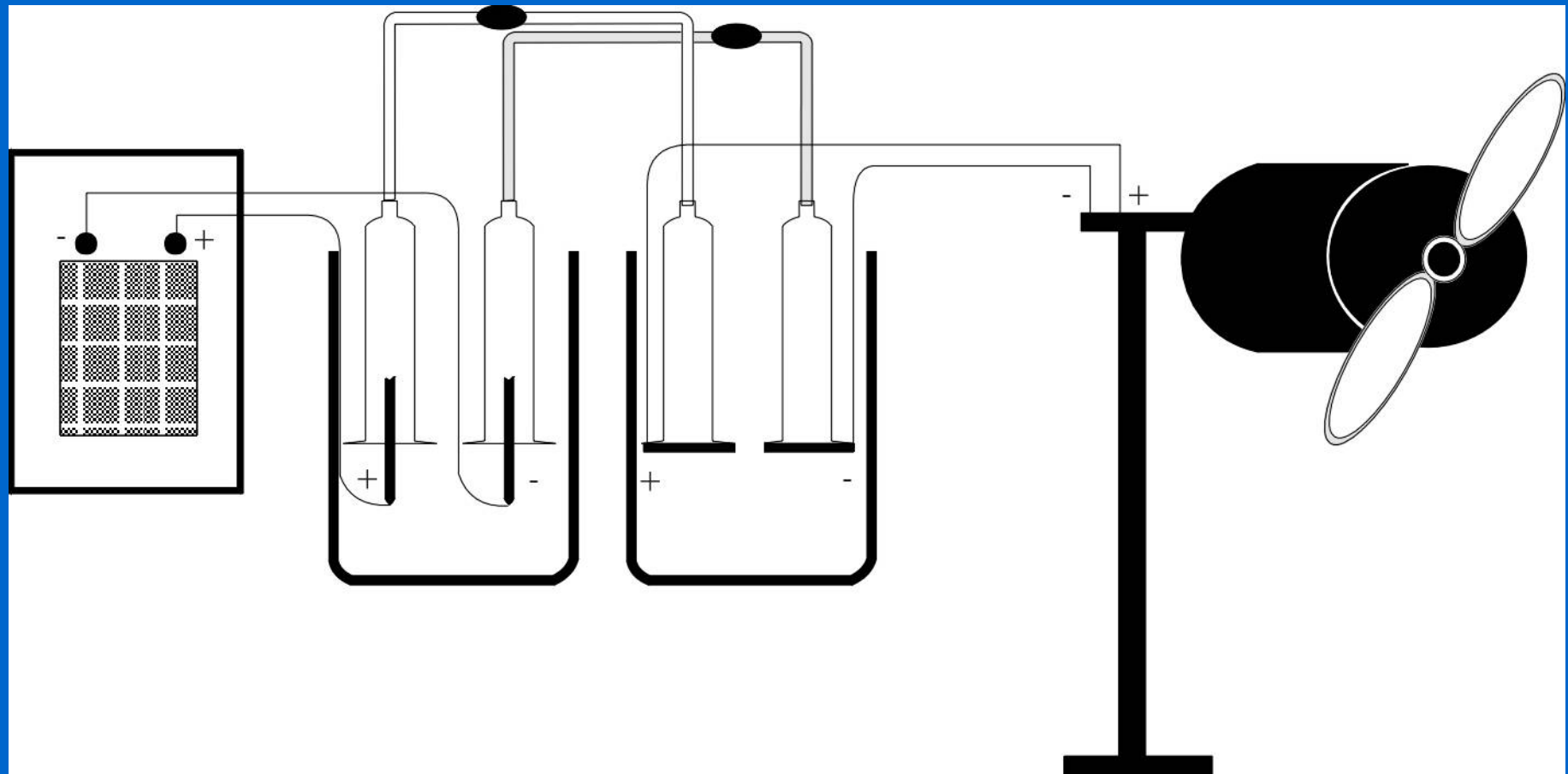
because it's our turn to take the responsibility for
our own future

-
-
-

OUR PROJECT

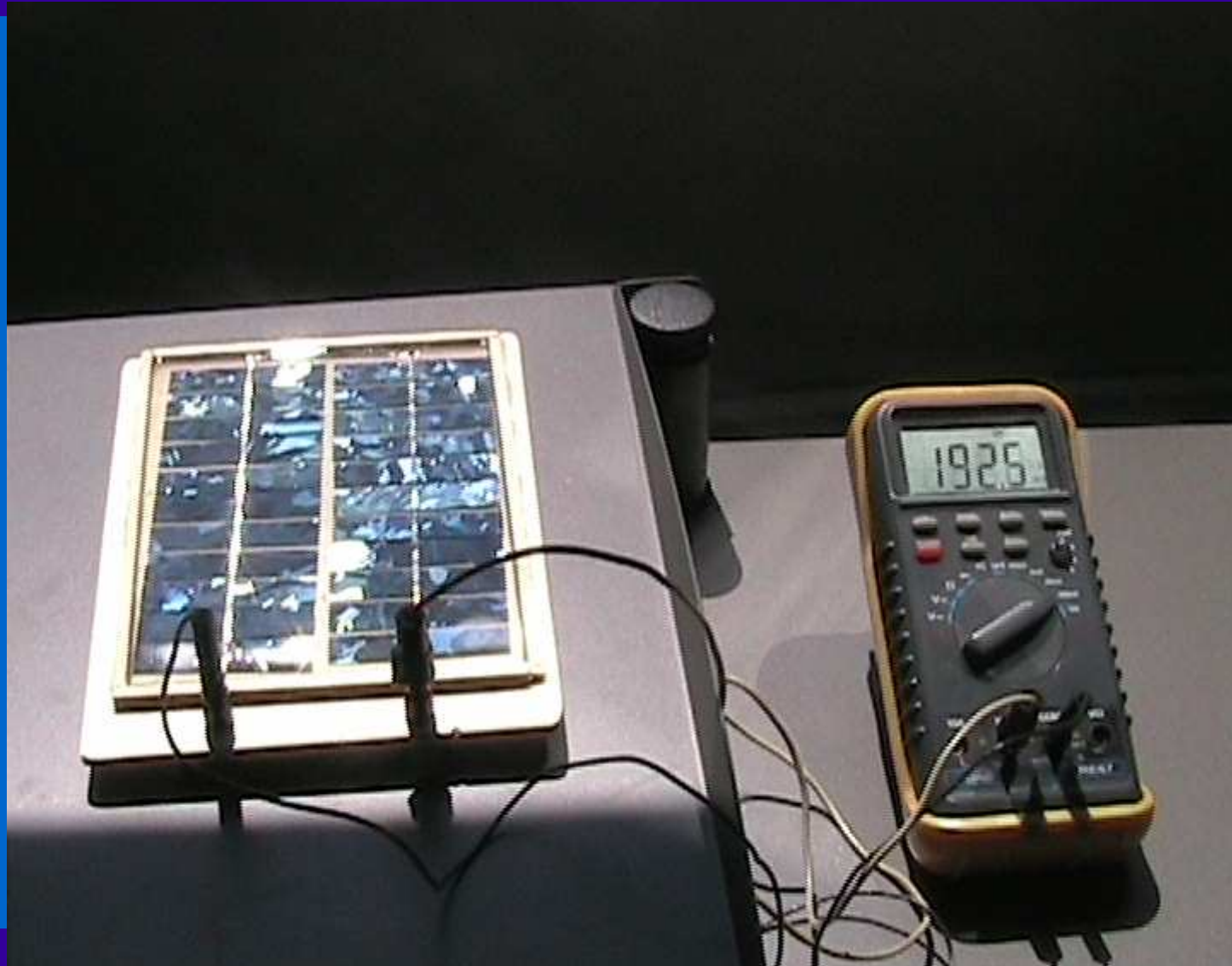
- Aim
 - Popularization of hydrogen economy concept among Bulgarian youngsters by demonstrating operation principles of some key technologies, which are going to build up the backbone of future eco energy system.

LABORATORY MODULE STAND



-
-
-

LABORATORY MODULE STAND



-
-
-

LABORATORY MODULE STAND

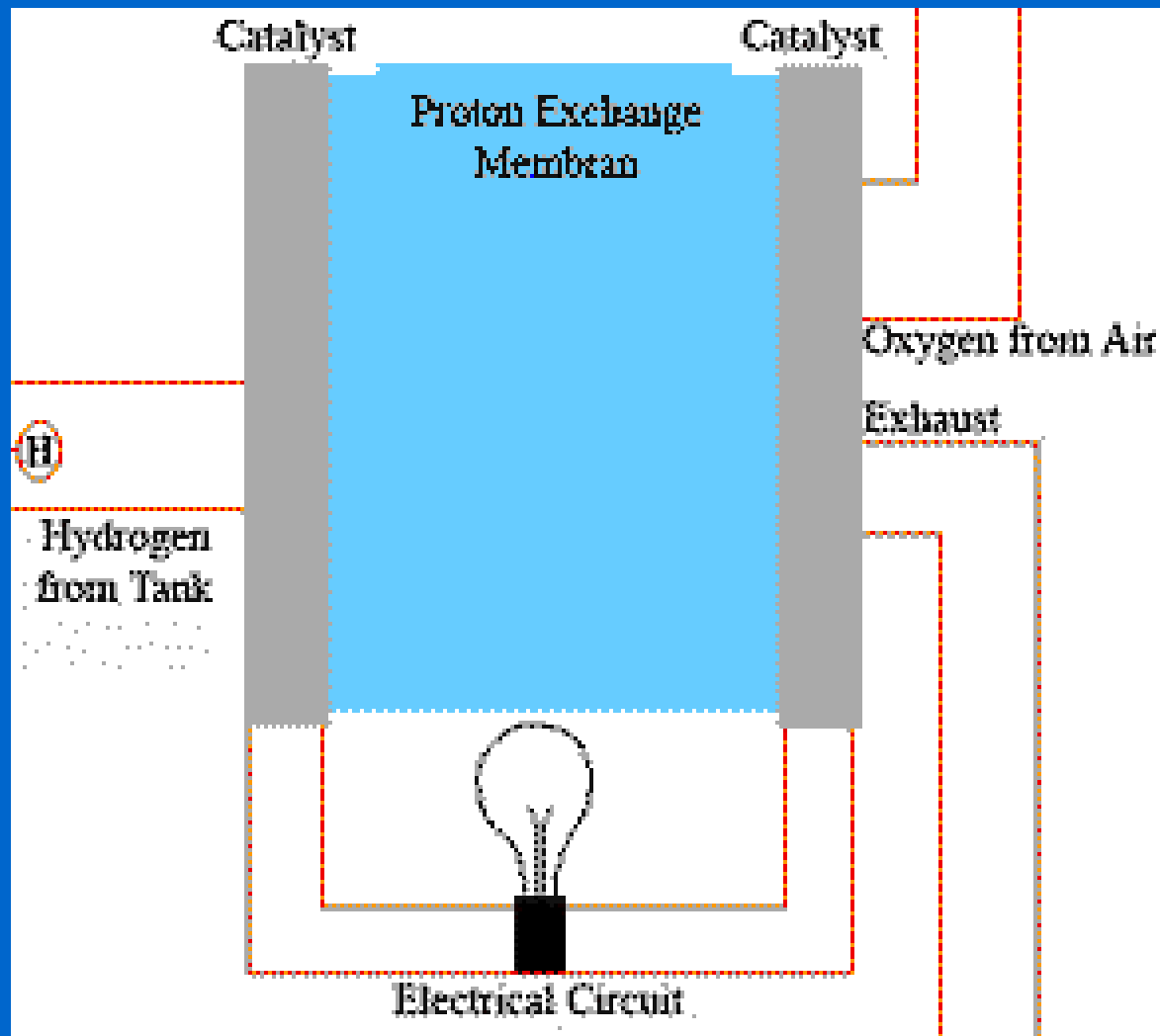


-
-
-

LABORATORY MODULE STAND

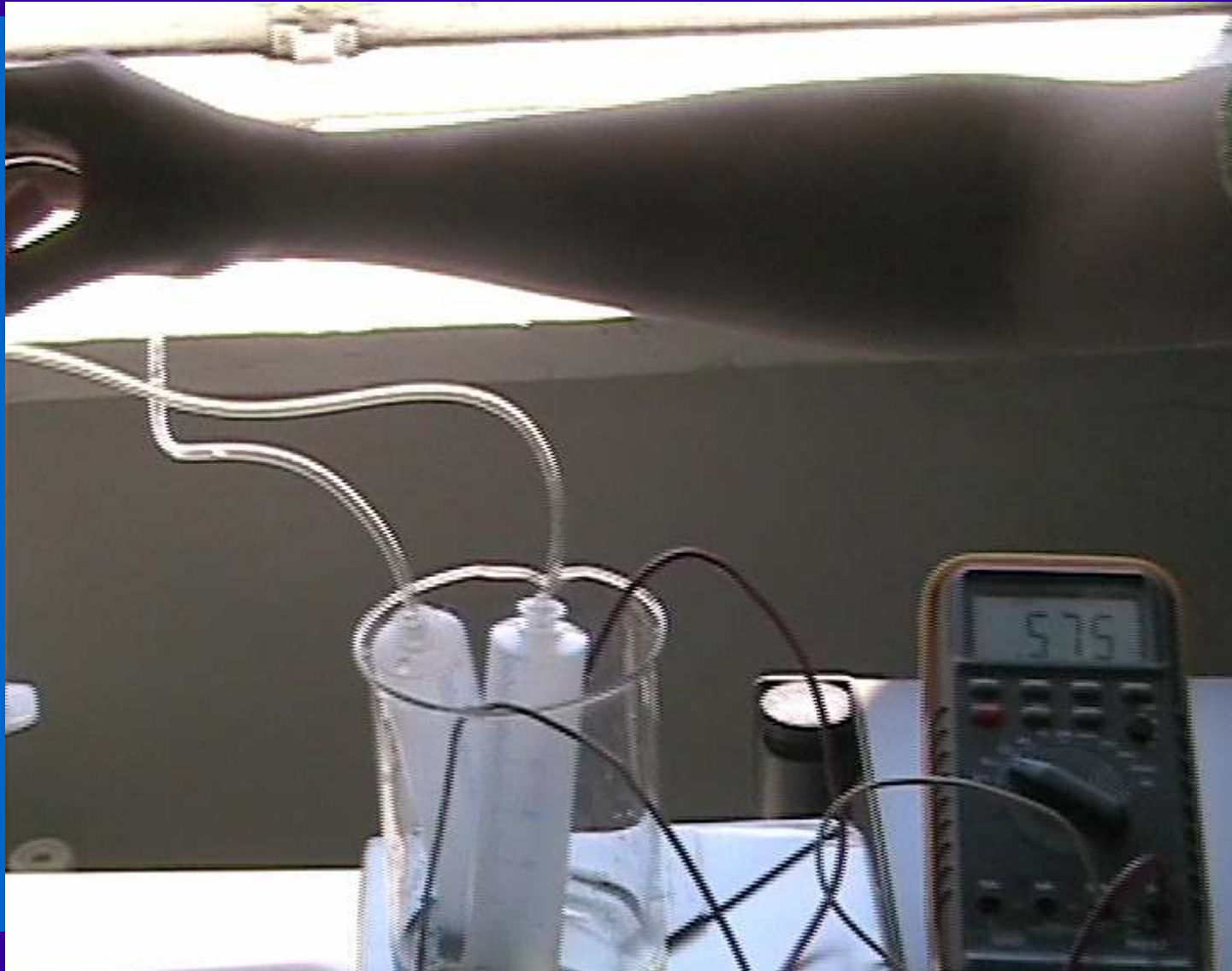


LABORATORY MODULE STAND



-
-
-

LABORATORY MODULE STAND



-
-
-

LABORATORY MODULE STAND



-
-
-

LABORATORY MODULE STAND

- Advantages
 - easy construction
 - available materials for implementation
 - possibilities for substitution of modules
 - ✓ wind turbine instead of solar panel
 - ✓ gas-generators instead of electrolyzer
 - ✓ other types of fuel cells

-
-
-

PROJECT DEVELOPMENT

- ✓ Construction of new devices for substitution of particular modules.
- ✓ Creating of a lab kit consisting basic components for construction of module stand.
- ✓ Organizing presentation for students.
- ✓ Making and distributing educational film for perspectives of the hydrogen economy.
- ✓ Participation in exhibitions and competitions.
- ✓ Realization of contacts with youth organizations, having similar interests.



Eco Energy Group

Thank you for your attention !!!

