

## TESS - THERMO-ELECTRIC HYBRID SOLAR SYSTEM

### Goal of the project

The project relates to a solar thermal - electric hybrid, which produces hot water and electricity using thermoelectric modules.

### Short description of the project

The system is composed of thermoelectric modules, and solar concentrator photovoltaic cells that convert heat to increase efficiency and reduce losses by convection, using a vacuum chamber that allows the positioning unit conversion at any position and allows adjusting the amount wastewater heat transferred by replacing hexagonal mirror solar concentrator photovoltaic.

### Project implemented by

Department of Applied Electronics, Politehnica University Timișoara

### Implementation period

03.01.2017 – 31.03.2018

### Main activities

Mechanical system implementation  
Full working prototype  
Experimental validation  
Final stage

### Results

- 2 published Journal papers (Thomson Reuters WoS) IF>1.5, Q2 and Q3
- 2 ISI Journal papers (under review)
- 8 ISI conference papers
- 2 patents

### Applicability and transferability of the results

- Effective solution for domestic use
- Tool for complex modeling, simulation and measurement
- Real time flow control

### Financed through/by

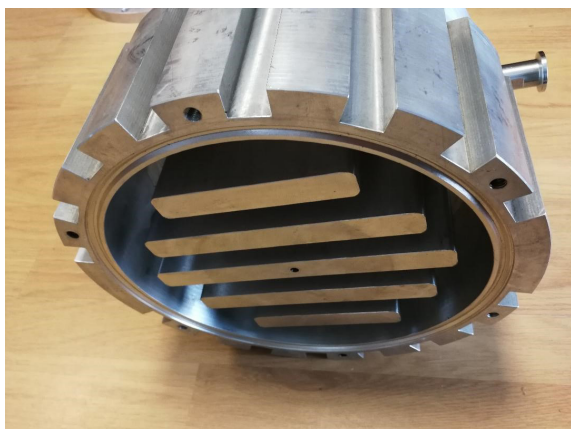
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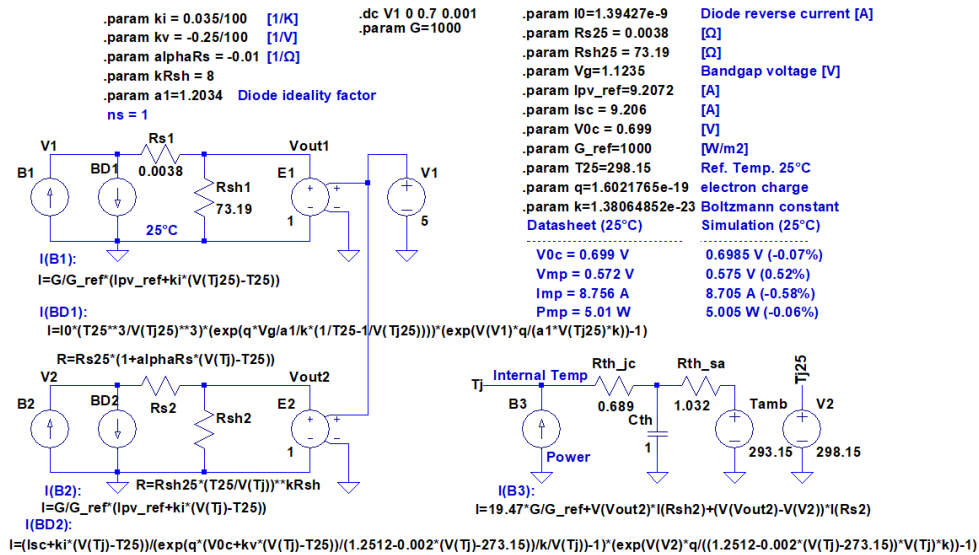
### Research centre

Intelligent Electronic Systems, <http://www.ccesi.etc.upt.ro/>

### Research team

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