1. INTRODUCTION
   1. PV generation
   2. Module Integrated Converter (MIC)
2. STATE OF THE ART
   1. Topologies of DC-DC converters
      1. Buck converter
      2. Boost converter
      3. Non-inverting Buck-boost converter
   2. Maximum Power Point Tracking techniques
      1. Constant voltage
      2. Perturb and Observe
      3. Incremental conductance
3. PROBLEM STATEMENT
   1. Objectives
4. NON-INVERTER BUCK-BOOST CONVERTER DESIGN
   1. System requirements
   2. Circuit analysis
   3. Component sizing
   4. Simulation results

1. HARDWARE IMPLEMENTATION
   1. Selection of commercial components
      1. Passive components
      2. Switching circuitry
         1. Switch sizing
         2. Heat sink sizing
         3. Drivers and optocouplers
      3. Sensoring circuitry
         1. Input voltage sensor
         2. Output voltage sensor
         3. Current sensor
      4. Power supplies
   2. PCB design
      1. PCB schematics (appendix?)
      2. Design considerations
      3. Power side
      4. Control side
2. MAXIMUM POWER POINT TRACKING
   1. Perturb and Observe implementation
   2. Simulation of the MPPT
      1. Model of the PV panel
      2. Simulation results
3. TEST AND VALIDATION OF RESULTS
   1. PCB
      1. Power Supplies
      2. Optocouplers
      3. Drivers
      4. Sensors
   2. MPPT
      1. RT-box
      2. PV simulator
      3. Load
      4. Experimental results
4. DISCUSSION
   1. Obtained results
      1. Positive results
      2. Negative results
   2. Encountered problems
   3. Future work
5. CONCLUSIONS

Things to remove, write or change in each chapter:

1. **INTRODUCTION**

I think the first part of the intro gives a general overview, but we can add/remove something if you think so. I consider it is ok like it is.

* 1. PV generation
* I deleted a paragraph for the STC conditions and included it in “PV panel model”.
* I added an explanation to Thassilo’s comment.
* I modified a bit the text to make it shorter and also corrected some mistakes.
  1. Module Integrated Converter
* I would call this section like this instead of MIC implementation because we don’t implement it here. Also, writing the entire name.
* Consider rewriting the first part as it is repetitive. Start explaining what is a MIC and why do we use it. Mention that the efficiency of the MPPT is usually higher than 99%.
* Delete the figure with the two MPP due to partial shading as we are not implementing this.
* Maybe reorganize the structure as mentioned in the comment.

1. **STATE OF THE ART**