

## I. IDENTIFICATION DATA

<b>Thesis title:</b>	<b>Spectrival response of photovoltiac cells and modules.</b>
<b>Author's name:</b>	<b>Adam Sandor</b>
<b>Type of thesis :</b>	master
<b>Faculty/Institute:</b>	Faculty of Electrical Engineering (FEE)
<b>Department:</b>	Electrotechnology
<b>Thesis reviewer:</b>	Dr. Amal Bouich
<b>Reviewer's department:</b>	Applied physics- University Polytechnic of Valencia

## II. EVALUATION OF INDIVIDUAL CRITERIA

<b>Assignment</b>	<b>challenging</b>
<i>How demanding was the assigned project?</i>	
The thesis manuscript presented by Mr. Sandor Adam constitutes a good and considerable contribution on the conversion of solar energy. Indeed, the increasingly serious, economic and environmental resource issues require not only the development of solar energy applications but also to work on efficiency, the approach adopted by Mr. Adam Sandor is based on the spectral response of different types of solar cells to two different Lock-in and nano-amp amplifier methodologies.	

<b>Fulfilment of assignment</b>	<b>fulfilled</b>
<i>How well does the thesis fulfil the assigned task? Have the primary goals been achieved? Which assigned tasks have been incompletely covered, and which parts of the thesis are overextended? Justify your answer.</i>	
the thesis fulfills all the tasks, the main task has been carried out, it was to calculate different spectral responses of different types of solar cells: monocrystalline solar cells, polysilicon, amorphous silicon and perovskite solar cells with two different methods lock-in amplifier and Nano-ampere. in addition, the comparison of measurement methods.	

<b>Methodology</b>	<b>outstanding</b>
<i>Comment on the correctness of the approach and/or the solution methods.</i>	
The way the student tested the spectral response of different types of solar cell glasses with two different methods lock-in amplifier and Nano-ampere, was helpful to obtain good results.	

<b>Technical level</b>	<b>A - excellent.</b>
<i>Is the thesis technically sound? How well did the student employ expertise in the field of his/her field of study? Does the student explain clearly what he/she has done?</i>	
This work presents interesting results that certainly contribute to improve the solar energy conversion paradigm , which reflects the motivation and seriousness of this student.	

<b>Formal and language level, scope of thesis</b>	<b>A - excellent.</b>
<i>Are formalisms and notations used properly? Is the thesis organized in a logical way? Is the thesis sufficiently extensive? Is the thesis well-presented? Is the language clear and understandable? Is the English satisfactory?</i>	
The manuscript is well organized and the English is good.	

<b>Selection of sources, citation correctness</b>	<b>A - excellent.</b>
<i>Does the thesis make adequate reference to earlier work on the topic? Was the selection of sources adequate? Is the student's original work clearly distinguished from earlier work in the field? Do the bibliographic citations meet the standards?</i>	

All citations used in the thesis are up to date and related to the topic of solar cells.

**Additional commentary and evaluation (optional)**

*Comment on the overall quality of the thesis, its novelty and its impact on the field, its strengths and weaknesses, the utility of the solution that is presented, the theoretical/formal level, the student's skillfulness, etc.*

from a substantive point of view, I would like to underline the very good scientific approach. Likewise, it is indisputable that the author deserves great merits for managing his results well.

**III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE**

*Summarize your opinion on the thesis and explain your final grading. Pose questions that should be answered during the presentation and defense of the student's work.*

For All these various reasons, I rapport a favorable judgment on the dissertation presented by Ms. Adam sansor and I consider that this work deserves a public defense for the title of Master of Czech Technical University in Prague.

The grade that I award for the thesis is **A - excellent**.

Date : **19.8.2021**

Signature :

**Dr. Amal Bouich**

Email : Ambo1@doctor.upv.es  
Departament de Física Aplicada  
Institut de Disseny i Fabricació (IDF)  
Universitat Politècnica de València

València (SPAIN)

