Science and Technology Development Fund

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Established by the presedential decree number 218 for the year 2007

Annex 4: GANTT Chart

Project Title **Development novel nano- composite materials to improve the efficiency of photovoltaic cells**
Project ID **1360**
Principle Investigator Prof. Dr. Mabrouk Kamel Elmansy
Star To be determined
Exp Duration of project 2 years

نسخة معتمدة

	Tasks/ Activities	Start	End	Duration (Days)	% Completed	Working Days	Days Complete	Remaining Days	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15	S16	S17	S18	S19	S20	S21	S22	S23	S24	S25
1	**Data Reviewing and sample preparation**			240 days																													
1.1	Collecting all literature and previous work on photovoltaic energy conversion solar cells.																																
1.2	The ideas and theories covering the heterojuctions in photovoltaic cells will be Studied																																
1.3	Preparation of PVA polymer films using dipping and casting to obtain good quality films																																
1.4	The PVA film structure will be confirmed using TEM, SEM and FT-IR besides homogeneity and stability will be tested.																																
	Report 1																																
2	**composite**			270 days																													
2.1	Improvement of PVA conductivity by doping with suitable dopant to be used as a host matrix for loading with CuI , the the optical absorption study in UV - visible range will be considered .																																
2.2	The conductivity level of PVA will be improved using gamma radiation , the optical absorption study in UV- visible range will be considered .																																
2.3	The structure of PVA films will also be studied using TEM, SEM and FT-IR																																
2.4	The stability of doped and or gamma irradiated PVA films will be studied using structure tools and optical absorption in UV - visible ranges																																
	Report 2																																
3	**publication**			210 days																													
3.1	Preparation of different concentrations of CuI nano particles in PVA matrix where they will be characterized using structure tools TEM , SEM and FT- IR																																
3.2	The optical absorption of nano polymer composites will be studied using optical absorption in both fluid and thin solid films																																
3.3	The electrical properties of such nano PVA composites will be subjected to electrical conductivity measurements																																
3.4	Report preparation and manuscript submission and editing																																
	Final Report																																

HELP

- Modify the **GREEN** cells and the **WBS**, **Tasks**, and **Task Lead** columns. The rest of the columns are formulas.
- The number of weeks shown in the gantt chart is limited by the maximum number of columns available in Excel.
- The Start Date that you choose determines the first week in the gantt chart, starting on a Monday.
- Use the slider to adjust the range of dates shown in the gantt chart.
- Only 48 weeks can be shown/printed at one time, because each week uses up 5 columns.

Q: The Working Days column shows "###". How do I fix that?
You need to install the Analysis ToolPak add-in that comes with Excel. Go to Tools > Add-ins, and select Analysis ToolPak.

Q: How do I make Task 2 start the day after the end of Task 1?
Use the following formula for the start date of Task 2:
=*EndDate*+1
where *EndDate* is the reference to the cell containing the end date of task 1

Q: How do I **add/insert tasks and subtasks**?
Copy the entire ROW (or a group of rows) for the type of task(s) you want to add and then right-click on the row where you want to insert the new tasks, then select *Insert Copied Cells*.
Important Note: When inserting a new subtask after the last subtask or before the first subtask, you will need to update the formulas for calculating the Level 1 %Complete and Duration (see below) to include the new subtask, because the ranges won't automatically expand to include the additional row.

Q: How do I calculate the **%Complete** for a **Level 1** task based upon the %Complete of all of the associated subtasks?
Example: If Task 1 is on row 11 and the subtasks are on rows 12-15, use the following formula:
=SUM(F12:F15)/COUNT(F12:F15)

Q: How do I calculate the **Duration** for a **Level 1** task based upon the largest end date of a sub task?
Example: If the Level 1 task is on row 11 and the sub tasks are on rows 12-15, use the following formula
=MAX(D12:D15)-C11

Q: How can I include **holidays** in the calculation of the Working Days?
You can add a list of holidays to exclude in the NETWORKDAYS function. See Excel's help (F1) for more information.

Q: How do I change the **print settings**?
Select the entire range of cells that you want to print and then go to File > Print Area > Set Print Area. Then go to File > Page Setup or File > Print Preview and adjust the Scaling and Page Orientation as desired.