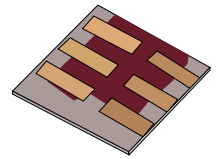
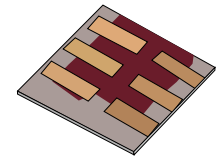


Overview



- What is gpvdm/theoretical overview?
- Installing gpvdm
- Running simple simulations
 - Your first gpvdm simulation
 - Changing electrical parameters
- Optical simulations and the materials database
- Perovskite solar cells and time domain simulations
- OFET simulations and finite difference meshing.
- The position of carriers in energy space and dumping to disk.
- Simulation OLEDs with gpvdm**

OLED simulation



General-purpose Photovoltaic Device Model (<https://www.gpvd.com>)

File Home Simulations Configure Databases Information

New simulation Open simulation Export data

Information

General-purpose photovoltaic device model

~~~~~

<https://www.gpvd.com>

To make a new simulation click *New Simulation* in the open an existing simulation select *Open simulation*.

There is more help on the [man pages](#).  
Please report bugs to: [roderick.mackenzie@nottingham.ac.uk](mailto:roderick.mackenzie@nottingham.ac.uk)

Follow the gpvdm project:  
[Youtube](#) [Twitter](#)

/home/rod/t/gpvd5.0/gui

New simulation (<https://www.gpvd.com>)

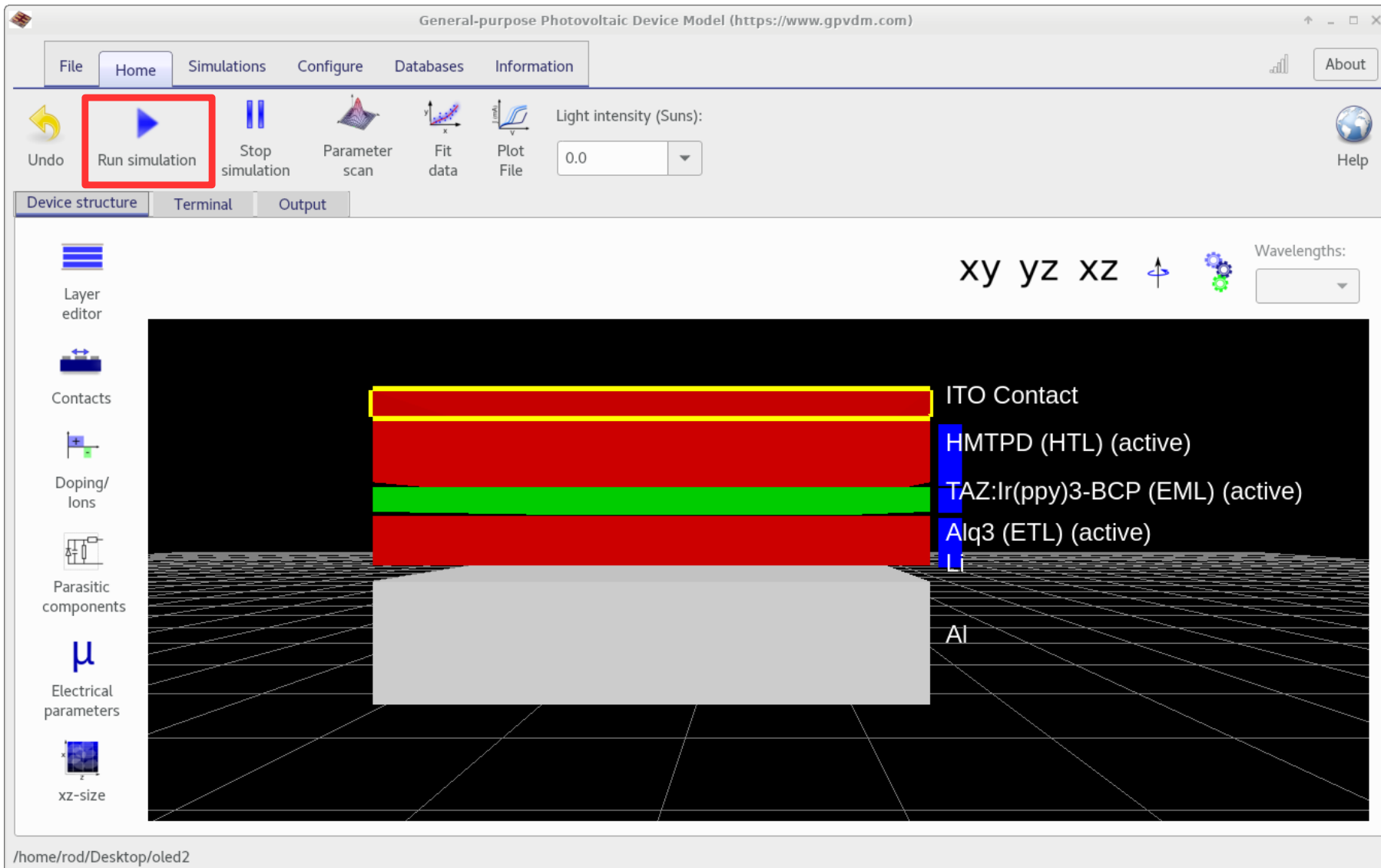
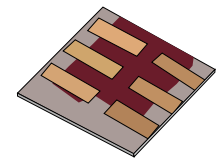
### Which type of device would you like to simulate?

- maeckel\_et\_al
- Organic solar cell for Merck/Michal Krompiec (merck)
- methods
- Organic LED (oled.gpvd.com)**
- oled\_papers
- Inverted organic solar cell (organic\_inverted.gpvd.com)

Show hidden Cancel **Next**

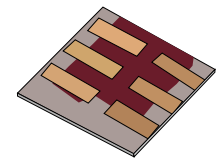
- This will setup an OLED simulation.

# You should get a window looking like this..



•Run the simulation...

# You will be able to see the rays emitted from the active layer.



General-purpose Photovoltaic Device Model (<https://www.gpvd.com>)

File Home Simulations Configure Databases Information

Undo Run simulation Stop simulation Parameter scan Fit data Plot File Light intensity (Suns): 0.0

Device structure Terminal Output

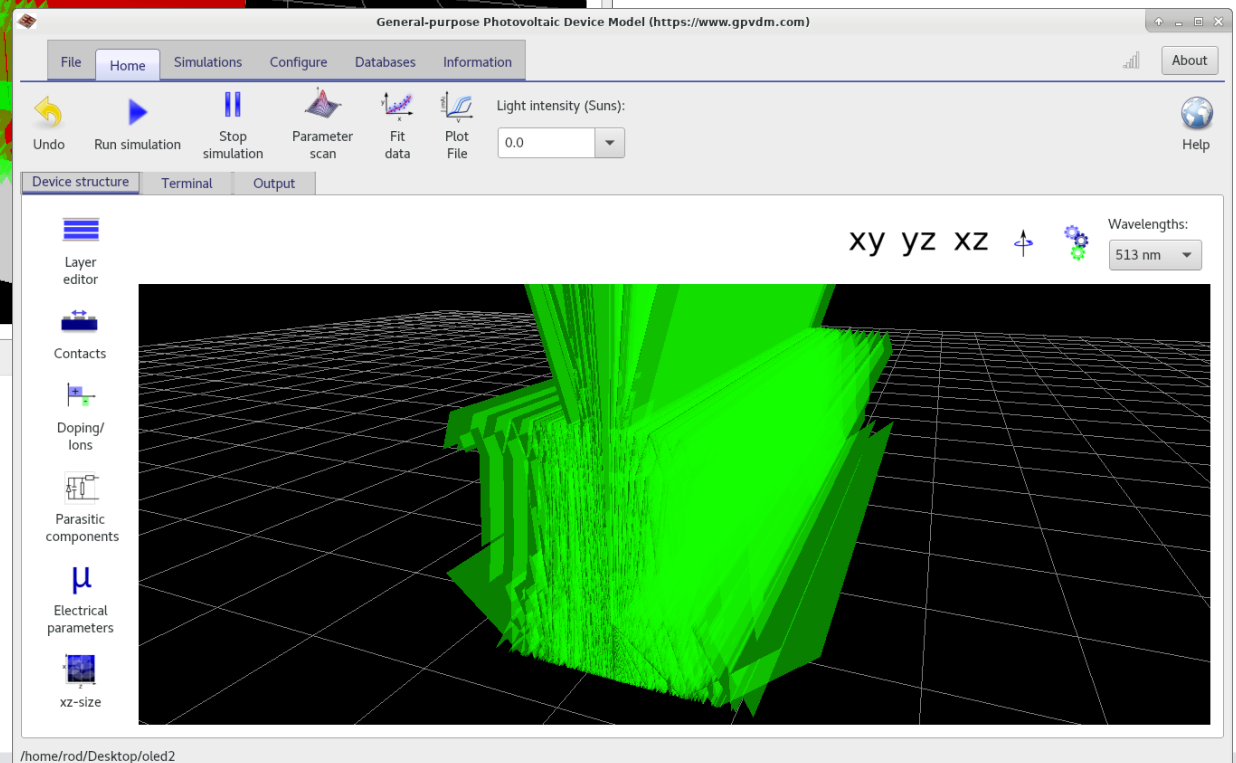
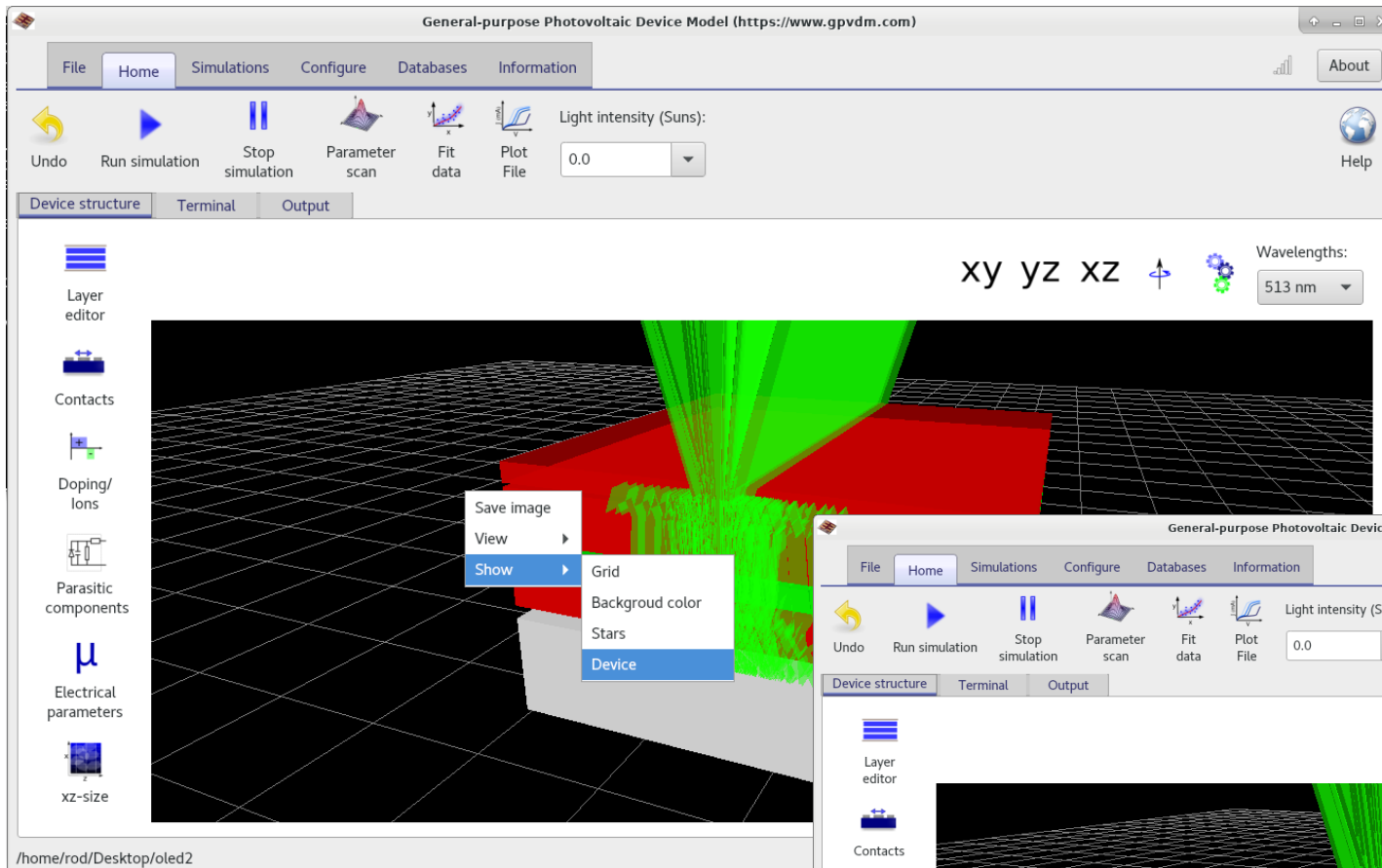
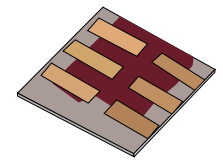
Layer editor Contacts Doping/Ions Parasitic components Electrical parameters xz-size

xy yz xz Wavelengths: 513 nm

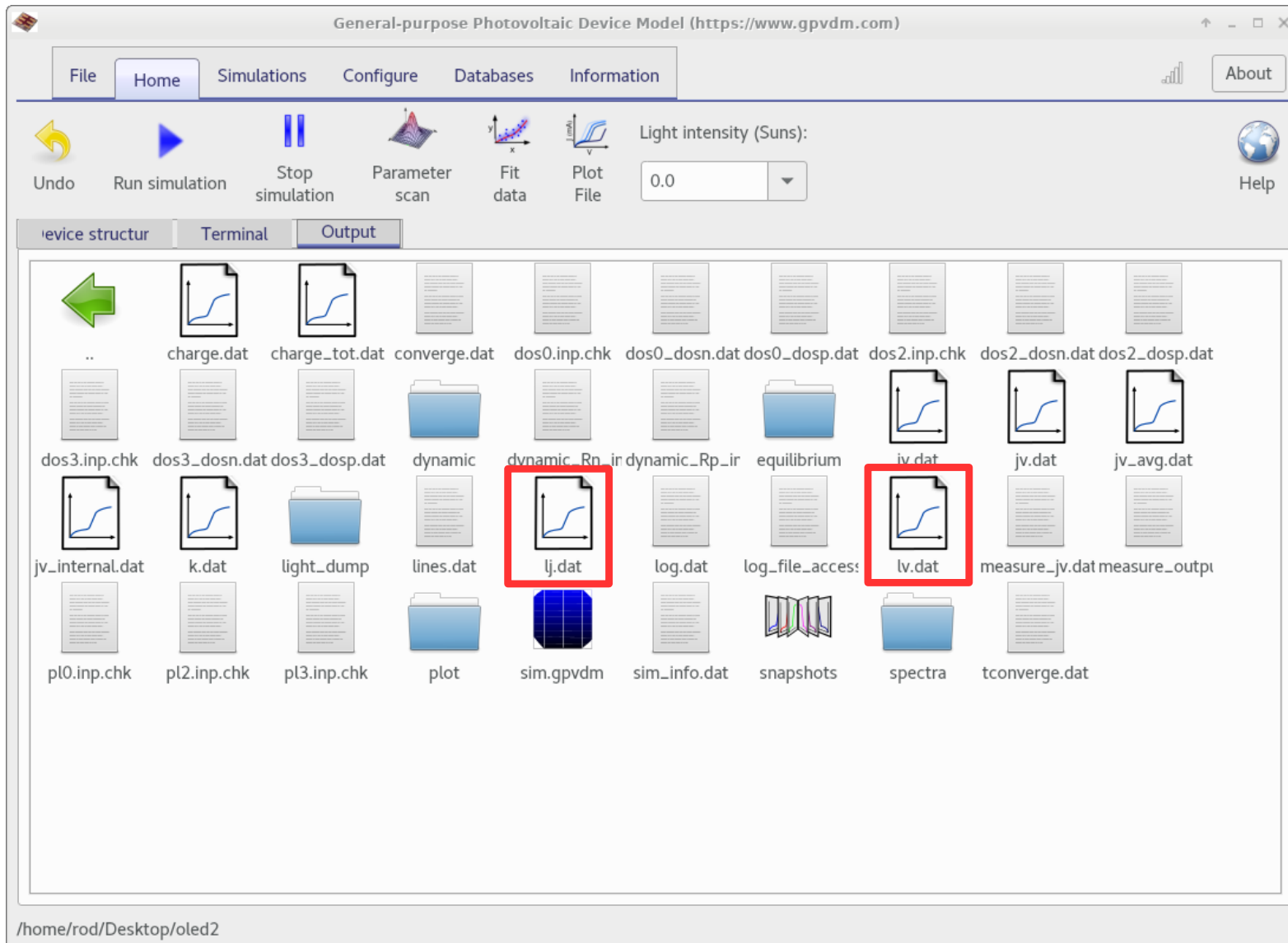
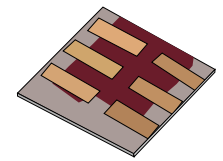
ITO HMTR TAZ:Ir( Alq3 (ET Li

/home/rod/Desktop/oled2

# Hide the device

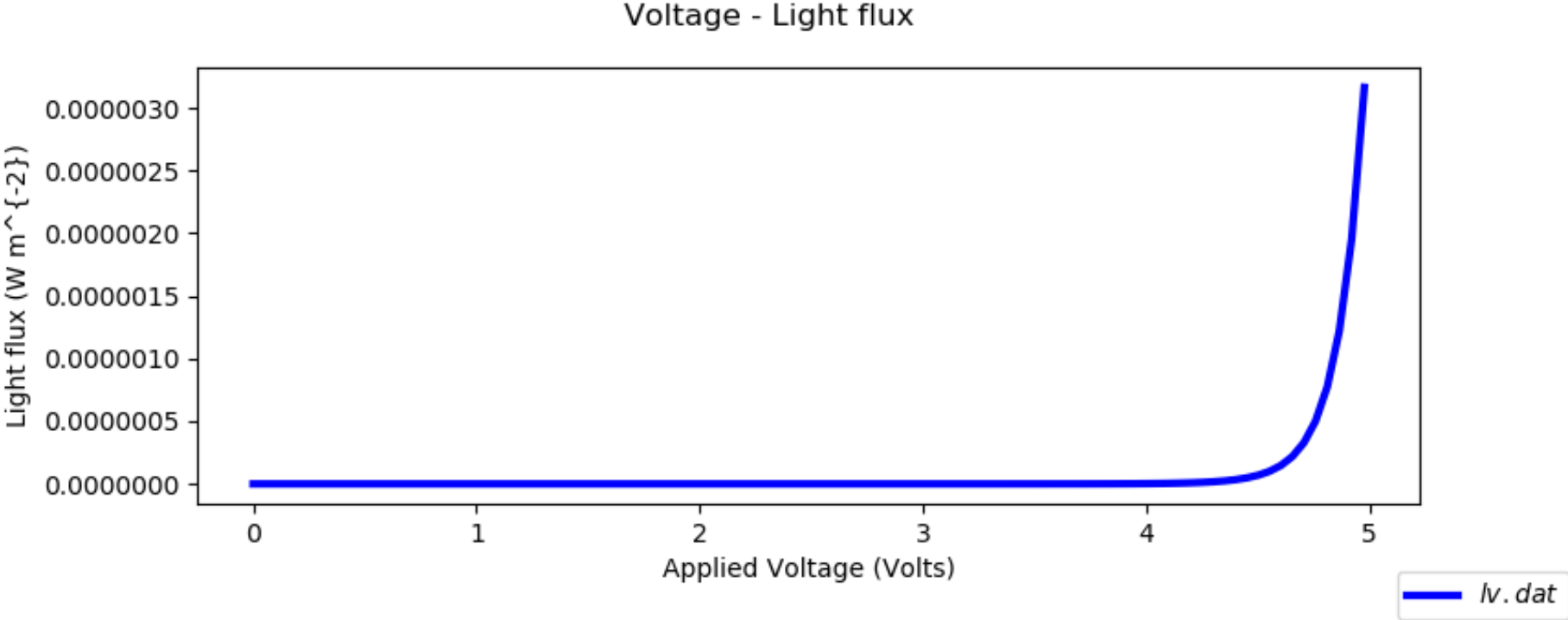
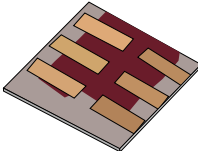


# In the output you will see two new files



- lj.dat and lv.dat.
- These are light intensity against voltage and current.

# Light emission.



# Where are the photons emitted?

