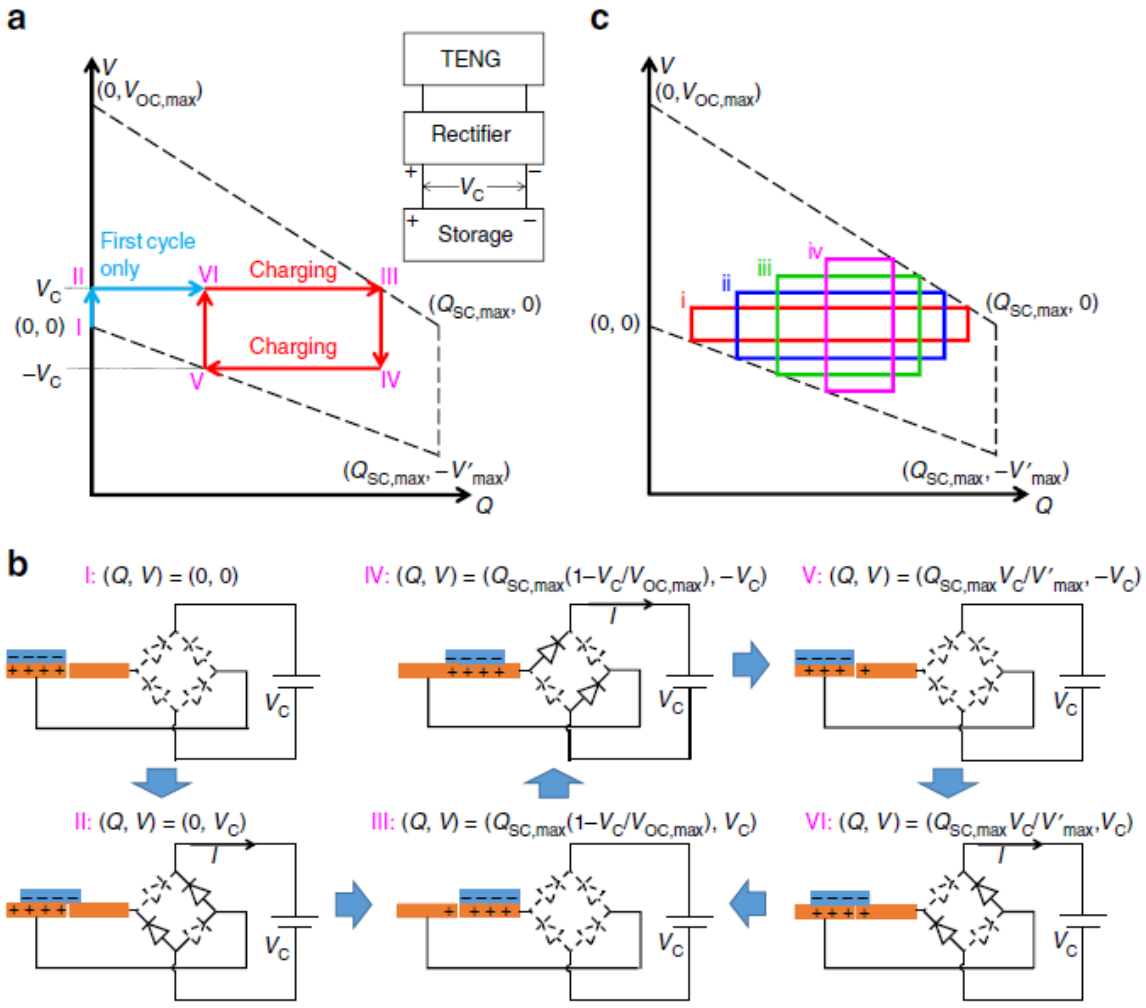
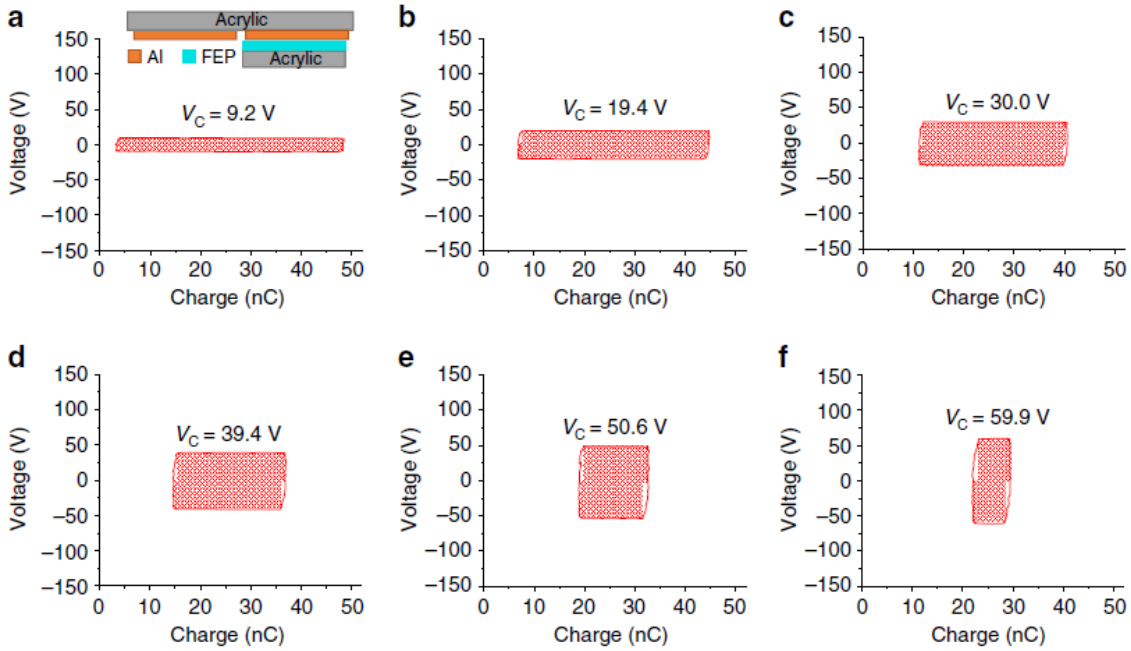
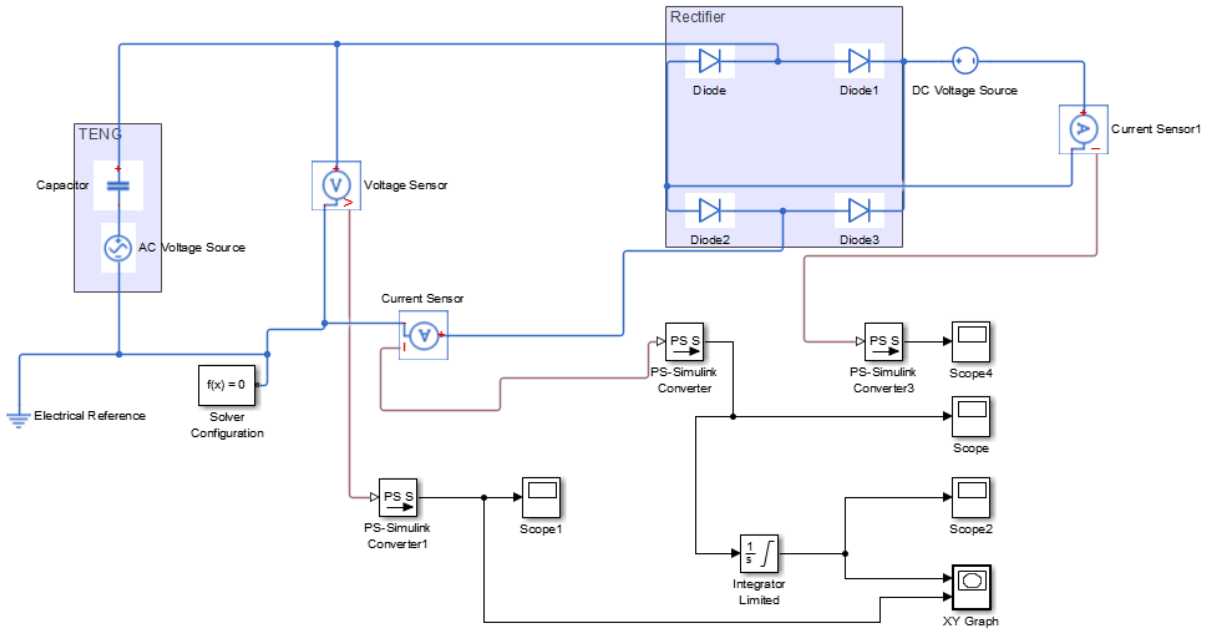


Direct charging Cycle .

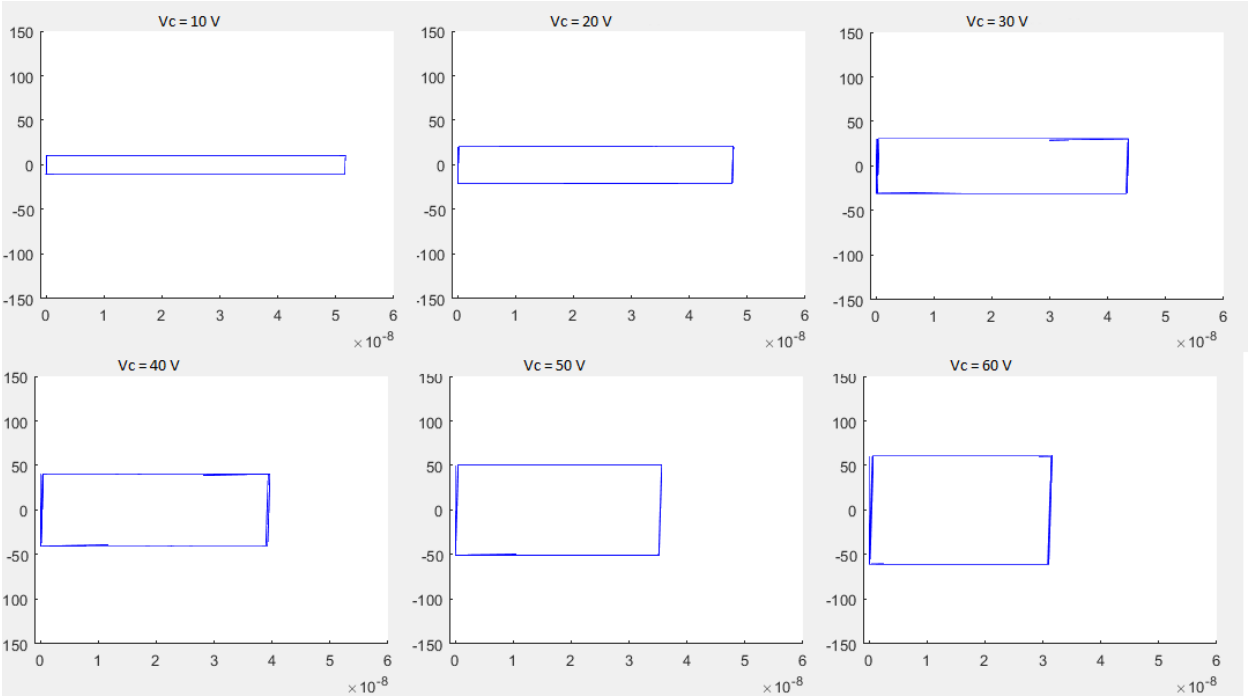
Paper's Experiment

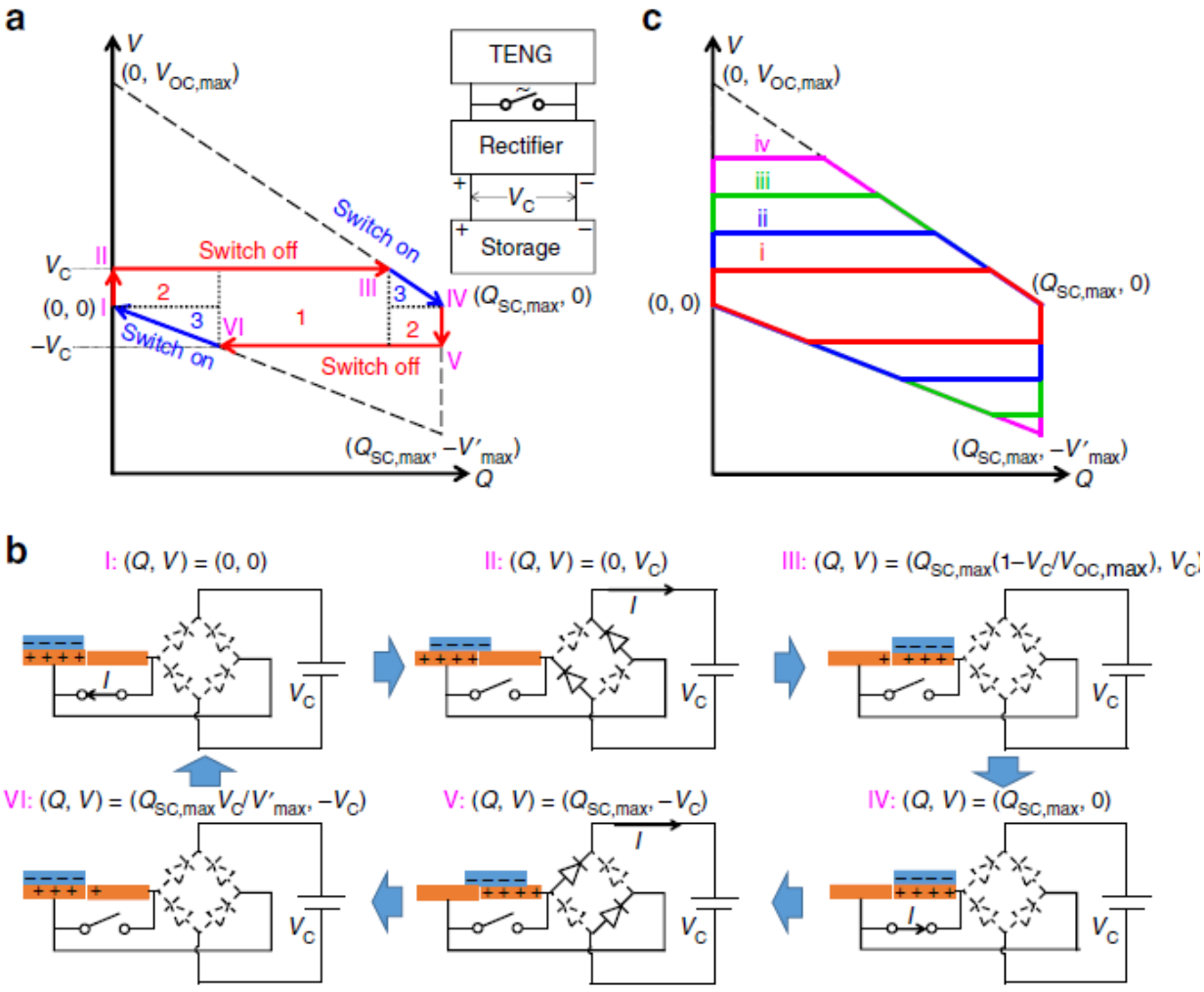


Thesis Simulink model.



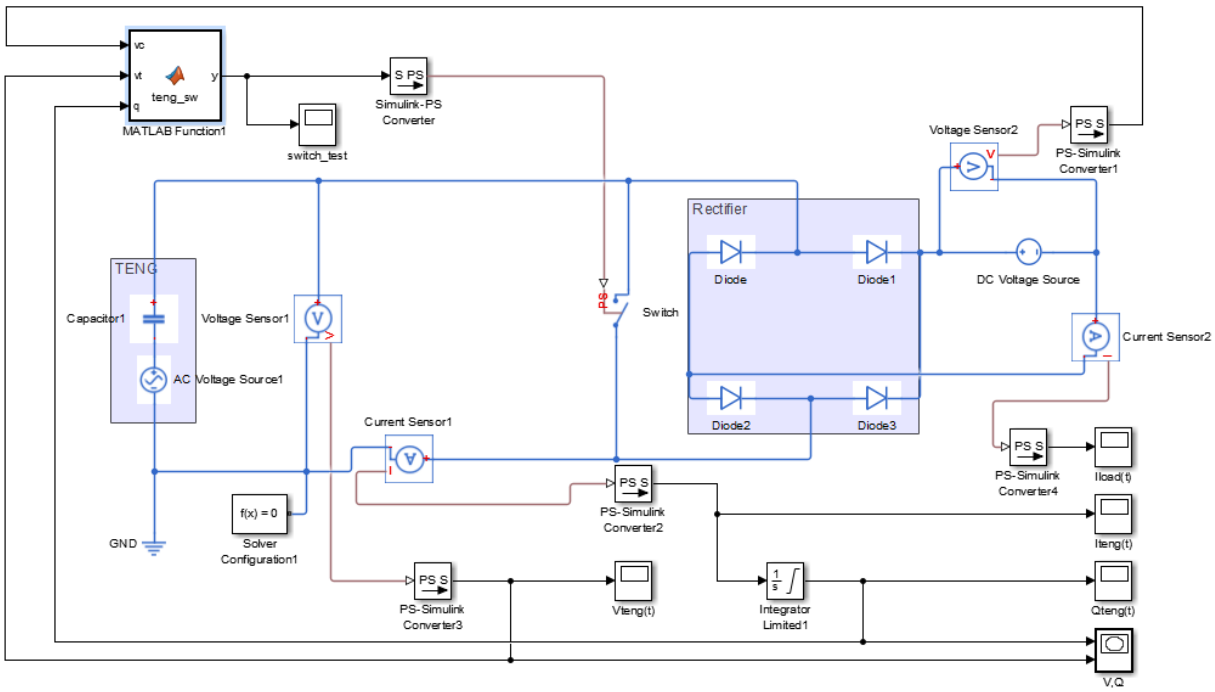
Thesis Simulink simulation.





Designed Charging Cycle

Simulink Model for Designed.



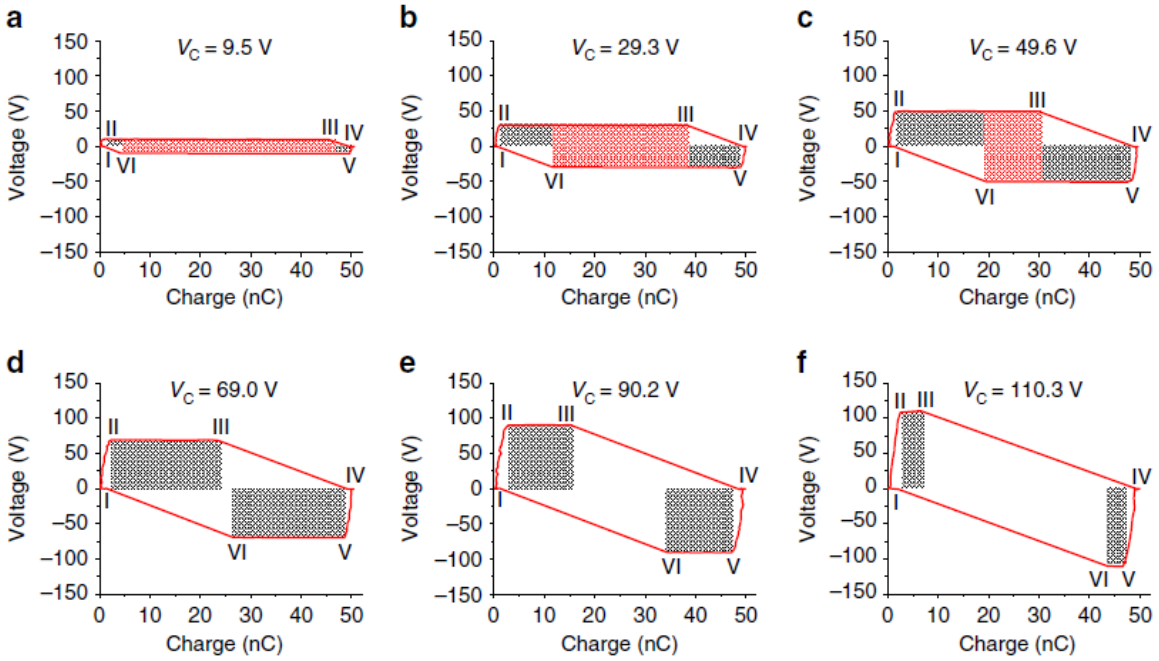
Switch implemented with matlab function, code below :

Editor - Block: teng_sw_rect_dc/MATLAB Function1

MATLAB Function1

```
1   function y = teng_sw(vc,vt,q)
2   %#codegen
3   voc=140;
4   vm = -140;
5   qmax =2.489*10^(-8);
6
7   Qsc = qmax*(1-vc/voc);
8   Qscm = qmax*vc/vm*(-1);
9
10  if (  q>=Qsc && vt>=0 ) || ( q<Qscm && vt<=0 )
11      y=5;
12  else
13        y=0;
14  end
15
16  % y=5;  closed (on)
17  % y=0;  open   (off)
```

Paper's experiment



Thesis Simulink Simulation