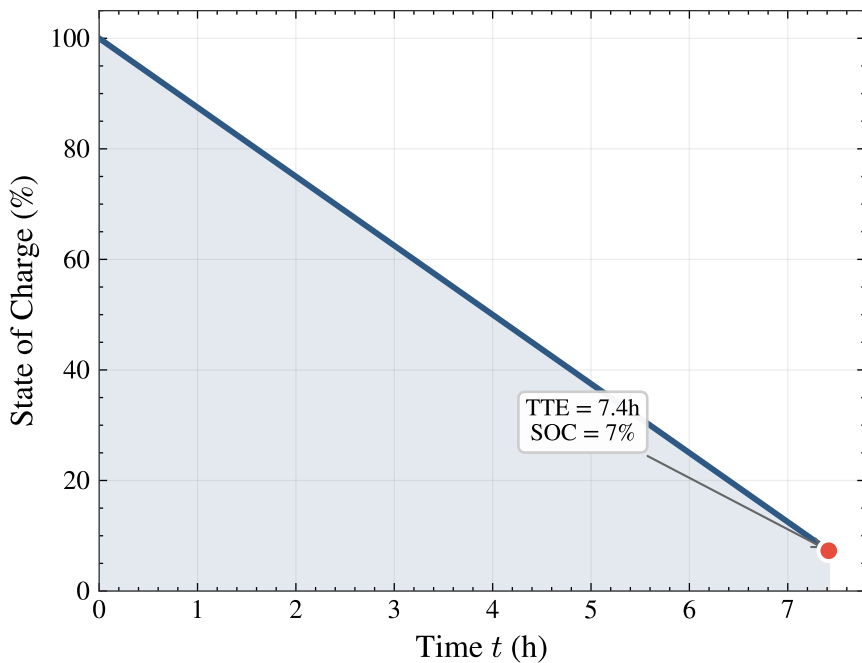
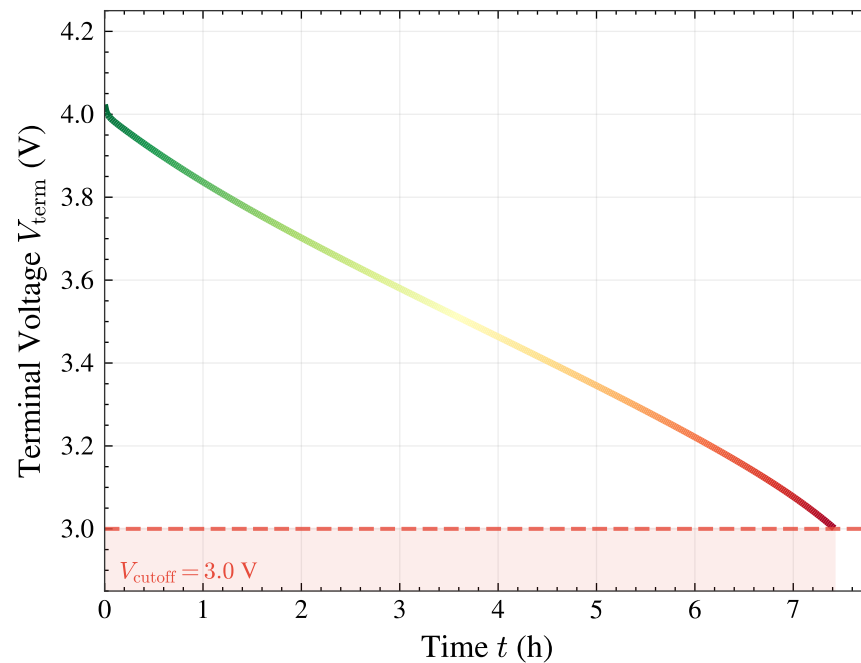


**Model I: DP-ECM Core Validation**  
**(4000 mAh Smartphone Battery,  $I = 500$  mA)**

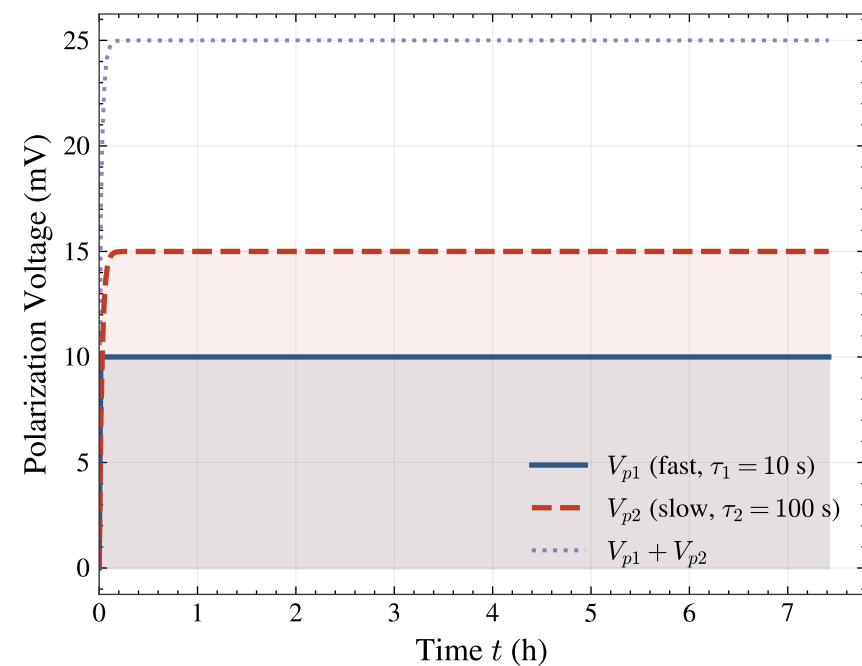
**(a) SOC Trajectory**



**(b) Voltage Profile**



**(c) Dual Polarization Dynamics**



**(d) OCV-SOC Characteristic**

