

Instruction of the program for computing the parameters of the modified P2D model

1. Run the program for computing the parameters of the modified P2D model before running the program for computing the outputs of the modified P2D model.

2. Set the 23-dimensional space for searching for the values of the parameters of the modified P2D model in Line 5-Line 27 and then narrow the 23-dimensional space for searching for the parameters of the modified P2D model in Line 88, Line 188, Line 370 and Line 544. In other words, set the ranges of the parameters of the modified P2D model in Line 5-Line 27 and then narrow the ranges of the parameters of the modified P2D model in Line 88, Line 188, Line 370 and Line 544.

3. Set the values of the parameters of the algorithms for computing the parameters and outputs of the modified P2D model in Line 28-Line 37 and the address of the file for storing the computed parameters of the modified P2D model in Line 497 and Line 643. Each column in the file for storing the computed parameters of the modified P2D model is a set of the computed parameters of the modified P2D model. The number of the columns in the file for storing the computed parameters of the modified P2D model equals to b_{set} in Line 29.

4. Load the average Li-ion battery load current, instantaneous Li-ion battery load current and Li-ion battery inter-electrode potential for computing the parameters of the modified P2D model and the time length of the average Li-ion battery load current, instantaneous Li-ion battery load current and Li-ion battery inter-electrode potential for computing the parameters of the modified P2D model in Line 38-Line 41.