VoidDetector Users Manual

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Fig. 1 shows the initial user interface of the developed VoidDetector. Users only need to select the folder which stores the optical microscopic images by clicking the lime box "Select Image Folder". Then click the light green "Run Analysis" button. All the images stored in the selected folder will be processed automatically. The results, including detected voids highlighted in images, an excel file named "Results_perImage.xlsx" recording the detailed geometric analysis of voids in each image, and an excel file named "Void_Volume_fraction.xlsx" summarising void fraction in each image, will be saved in a newly created folder named "Results" within the selected image folder.

Once completing the analysis for all the images in the selected folder, a status bar, "Completed" as shown by the green text in Fig. 2 will show to notify users. If users continue to process images in another folder by clicking "Select Image Folder", the status bar will disappear as shown in Fig. 1 and repeat the void analysis process.



Fig. 1, VoidDetector user interface (initial)



Fig. 2, VoidDetector user interface (completed)