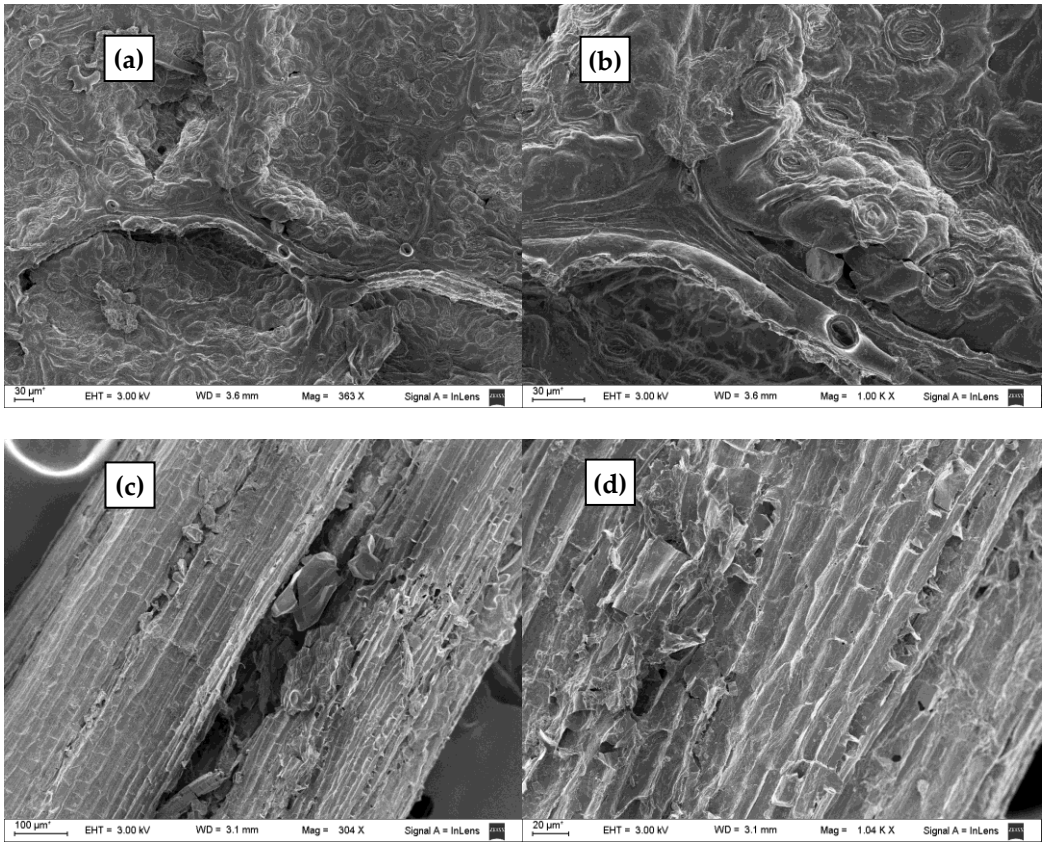

Figure 4: SEM photographs of (a-b) untreated leaves stomata and (c-d) untreated stems.

Enlargements of stomata untreated and treated with the acid-oxidative solution and with dilute sulphuric acid are illustrated in **Error! Reference source not found.** for comparison. The stomata structures were preserved after the treatments. However, the untreated surface (**Error! Reference source not found.**a) was apparently filled and covered by lignin, as confirmed by CLSM. The sample treated with sulphuric acid (**Error! Reference source not found.**b), with negligible delignification, appeared very similar to the untreated sample. Physical alterations of surface morphology observed in the samples treated with the acid-oxidative method for which lines are more defined and less uniform (**Error! Reference source not found.**c-d) could be due to lignin removal. SEM images revealed that the treatment further exposed cellulose fibers by dissolving the covering lignin, turning the substrates rougher. Even though the cellulose fiber structure was exposed, the polymer structure was kept suggesting that the hydrolysis to develop reducing sugars may require tough conditions.