

 $10^{8}$ 

unique characterization of this space. Different subsets of all non-decomposable optimal flux pathways can, therefore, be used to describe the optimal solution space. This can result in different properties of the set of vertices. Comparison with Figure 5 shows that especially the cost distributions are different. Here, only bimodal distributions were found while also a multimodal distribution was found by enumerating the network with reversible-reaction splitting. Note that due to file size limitations we only show a subset (10.000) of vertices for all conditions in the scatter plot.