In my analysis of the data I decided to loop through the scenario, then the realization and finally the files, so I used three loops in my code to achieve this. As shown below

 for i in range(0, len(folder)):

        fnameout1 = 'Summary'+folder[i].split('\\')[1]+'.dat'

        fnameout2 = 'Summary'+folder[i].split('\\')[1]+'.png'

        for j in range(0, len(folderpart2)):

            allfiles = os.listdir(folderpart1+folder[i]+folderpart2[j])

            fullpath = folderpart1+folder[i]+folderpart2[j]

            os.chdir(fullpath)

            print(fullpath)

            for k in range(0,len(allfiles)):

                data = np.genfromtxt(allfiles[k],skip\_header=2)

                x= data[0,2]

                t= data[:,0]/86400.

During my analysis I realized that the scipy.optimization.minimize() function was not minimizing the rmse function, I searched for the problem and found out that it was because of low values of concentration, the rmse value was changing at a very slow rate so the function was converging before giving the optimum value therfore in order to make the optimization work I had to scale the concentration data by a factor of 1e+300 and then reduce the value inside rmse function because it was becoming ‘ínf’ at such high value. The final results were satisfactory as compared to the previous results and I was able to achieve a better fit of the curve.