cheg325 aspen recreate 9.6-2

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bringing in experimental data after copy pasting it into a text file from `illustration 10.2-4`

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
df = pd.read_csv('data.txt', sep=' ')
df
```

	xb	gb	gtmp
0	0.0819	1.408	1.003
1	0.2192	1.343	1.011
2	0.3584	1.250	1.046
3	0.3831	1.242	1.048
4	0.5256	1.158	1.116
5	0.8478	1.023	1.508
6	0.9872	1.000	1.968

now setting up the aspen with both components and reading from `illustration 10.2-4` that this is at 55 C.

```
aspendata = pd.read_csv('aspen.txt', sep='\t')
aspendata = aspendata[['MOLEFRAC BENZE-01','LIQUID1 GAMMA BENZE-01', 'LIQUID1 GAMMA 2:2:4
xb = aspendata['MOLEFRAC BENZE-01']
ln_gammab = np.log(aspendata['LIQUID1 GAMMA BENZE-01'])
ln_gammat = np.log(aspendata['LIQUID1 GAMMA 2:2:4-01'])
aspendata.head(3)
```
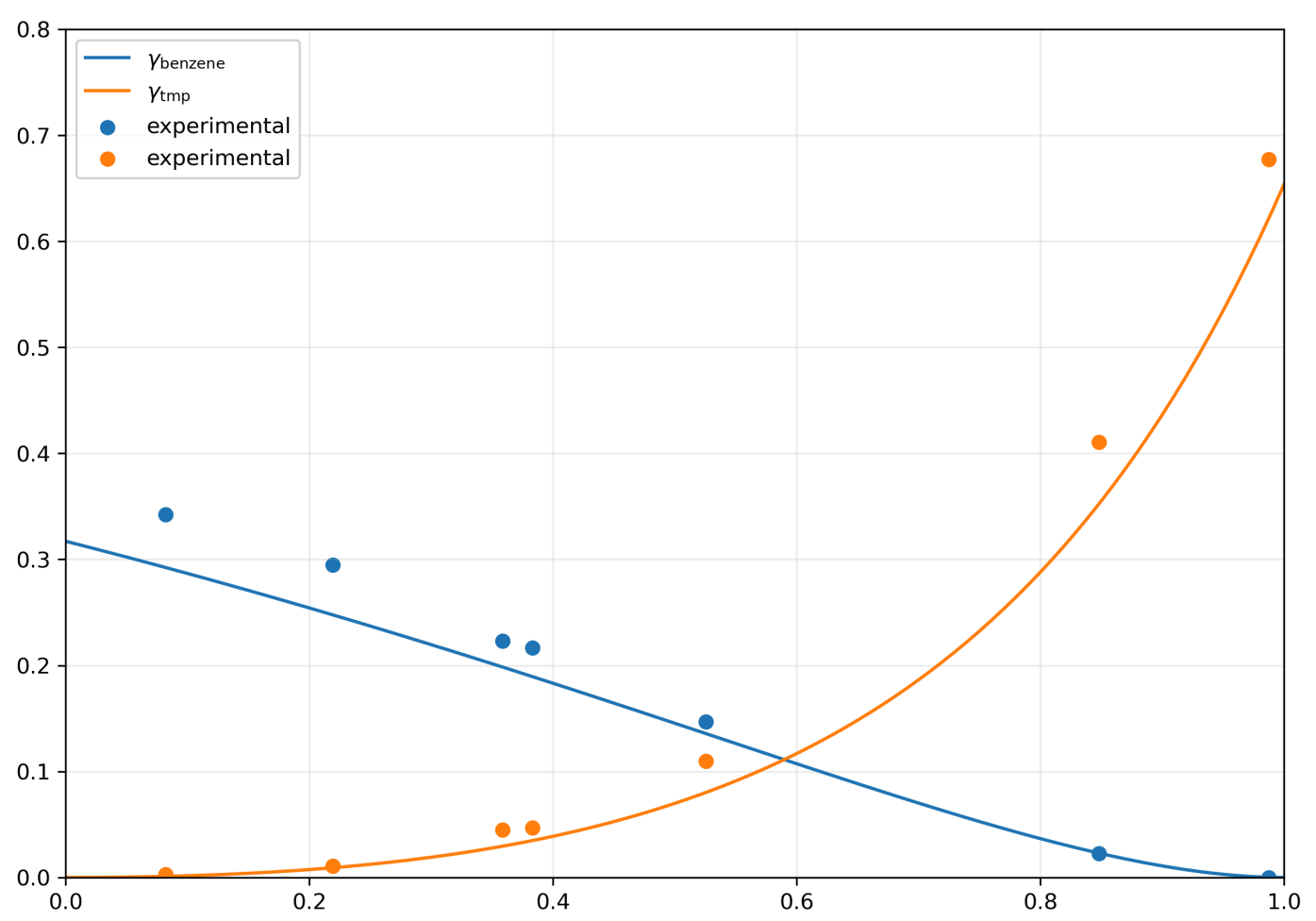
	MOLEFRAC BENZE-01	LIQUID1 GAMMA BENZE-01	LIQUID1 GAMMA 2:2:4-01
0	0.00	1.373071	1.000000
1	0.01	1.369042	1.000015
2	0.02	1.364995	1.000060

```
fig, ax = plt.subplots(figsize=(10,7), dpi=300, subplot_kw={'xlim':(0,1), 'ylim':(0,0.8)}

plt.plot(xb, (ln_gammab))
plt.plot(xb, ln_gammat)

plt.scatter(df['xb'], np.log(df['gb']))
plt.scatter(df['xb'], np.log(df['gtmp']))

ax.legend([r'$\gamma_{\text{benzene}}$', r'$\gamma_{\text{tmp}}$', 'experimental', 'exper
ax.grid(alpha=0.2)
```


by eye this looks identical to figure 9.6-2

```
# filler
```