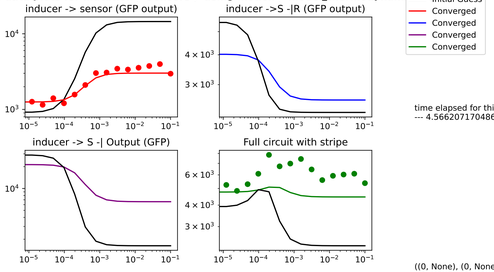
**['SM data type data plots for mutation', 'Sensor3', 'using model:', 'model_thermodynami**




time elapsed for this fit
--- 4.566207170486 45 seconds ---

((0, None), (0, None), (0, None), (0, None), (0, None), (1.2857656642374193, 1.2857656642374193), (0.011016712487438105, 0.011016712487438105), (7.228938965214563e-05, 7.228938965214563e-05), (163354.9385852868, 163354.9385852868), (1.2297278821229507, 1.2297278821229507), (0.012476585206976027, 0.012476585206976027), (2.0182746804764 58e-06, 2.0182746804764 58e-06), (91094.91689184132, 91094.91689184132), (1.4826039143168819, 1.4826039143168819))

Across all four plots:

RSS (converged)=0.283

RSS (initial)=4.881

RSS (% reduction)=0.945

| | epsilon | Initial_guesses | Converged |
|---|---|---|---|
| P_b | 6.426573e-01 | 6.710423e-02 | 7.097615e-01 |
| P_u | 4.367053e-06 | 2.189588e-06 | 6.556641e-06 |
| K_12 | 3.814153e+02 | 1.065381e+03 | 1.446797e+03 |
| C_pa | -6.415724e+08 | 1.634913e+09 | 9.933403e+08 |
| A_s | -1.149891e+04 | 1.452100e+04 | 3.022085e+03 |
| P_r | 0.000000e+00 | 1.285766e+00 | 1.285766e+00 |
| C_pt | 0.000000e+00 | 1.101671e-02 | 1.101671e-02 |
| K_t | 0.000000e+00 | 7.228939e-05 | 7.228939e-05 |
| A_r | 0.000000e+00 | 1.633549e+05 | 1.633549e+05 |
| P_o | 0.000000e+00 | 1.229728e+00 | 1.229728e+00 |
| C_pl | 0.000000e+00 | 1.247659e-02 | 1.247659e-02 |
| K_I | 0.000000e+00 | 2.018275e-06 | 2.018275e-06 |
| A_o | 0.000000e+00 | 9.109492e+04 | 9.109492e+04 |
| F_o | 0.000000e+00 | 1.482604e+00 | 1.482604e+00 |

```
message: Optimization terminated successfully.
 success: True
  status: 0
     fun: 0.2827193060261 3404
       x: [ 7.098e-01  6.557e-06 ...  9.109e+04  1.483e+00]
     nit: 880
    nfev: 1621
final_simplex: (array([[ 7.098e-01,  6.557e-06, ...,  9.109e+04,
                         1.483e+00],
                       [ 7.098e-01,  6.557e-06, ...,  9.109e+04,
                         1.483e+00],
                       ...,
                       [ 7.098e-01,  6.557e-06, ...,  9.109e+04,
                         1.483e+00],
                       [ 7.098e-01,  6.557e-06, ...,  9.109e+04,
                         1.483e+00]]), array([ 2.827e-01,  2.827e-01, ...,  2.827e-01,  2.827e-01]))
```