**Manual**

Everything in the file ‘Equation of state research, WEI’ is my research works through the whole year 2020.

* File ‘bias calculation’ includes the bias MATLAB code (bias.m) for Dr. Sung’s calibration model,
* File ‘data & tecplot’ includes
  + the data for thermal properties evaluation (in excel file)
  + the MATLAB code for thermal properties evaluation(.m)
  + Figures(png)
  + Tecplot file(.lay)
* File ‘master thesis’ includes
* Different versions of my Master thesis
* All the forms
* All the figures used in thesis and presentation
* Presentation slides(A Modified Peng-Robinson Cubic Equation of State Based)
* Different versions of my Master thesis abstract
* Different versions of my Master thesis for stat part
* File ‘original sung package’ includes Dr. Sung’s calibration model and 2p,1p examples.
* File ‘PDF’ includes
* All the useful books for this research(books)
* Papers for EoS(EoS)
* Leaning materials for R language (R learning)
* Papers for Stat(stat)
* Leaning materials for stat (stat testbook)
* File ‘stat previous attempt with save and ko model’ includes results and code using ‘SAVE’ and ‘K&O’ model
* File ‘summer work’ includes all the works I did in the summer 2020,
* The reference alpha values for different substance using NIST density data(alpha value for diff substance)
* Reference alpha values using fugacity equilibrium comdition(fugacity equlibrium condition for alpha)

More details refer to my weekly reports during the summer.

* File ‘sung model data’ includes different models using Dr.Sung’s package for 3 different substances
* File ‘Spring 2020’ includes all the works I did in spring.
* Density evaluation for pure substances (oxygen and decane), mixture(kerosene)
* Thermal properties (specific heat, specific enthalpy, SOS) evaluation for pure substances (oxygen and decane), mixture(kerosene)
* File ‘Weekly report’ includes the weekly presentation sildes
* It will be updated base according to the new progress.

Resent update:

* ‘Sung model with no noise’ includes all the density predictions for three different substance with a new model using 2 input (Tr,Pr)
* Slides ‘research report’ includes all the resent figures and their paths

Last modification on 12/24/2020

Wei Chen