

REFPROP 永久嵌入EXCEL运行安装步骤

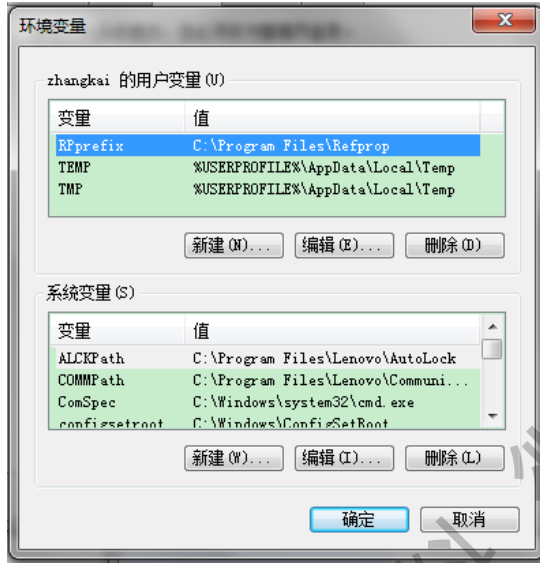
Zhangkai 20131211

声明:

- 1.为了保证安装成功,希望严格按照安装步骤进行;若安装完成遇到错误,对相应步骤调整即可。
- 2.该文档假设REFPROP文件默认安装在"C:\Program Files\REFPROP"下的前提下编写的,安装在其他位置做相应的调整。

1. 建立环境变量

打开"开始/设置/控制面板/系统/高级/环境变量"(英文系统为 Start/Settings/Control Panel/System/Advanced/Environment Variables),如下图所示。



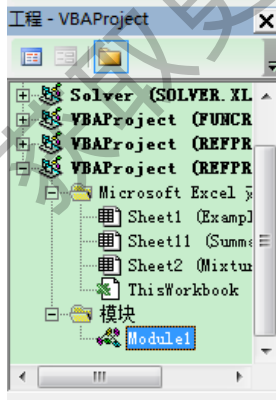
新建一个环境变量,变量名= Rpprefix, 变量值= C:\Program Files\Refprop
点击保存→确定;

2. 建立 EXCEL加载项

打开REFPROP安装文件夹下的Excel文件 REFPROP.xls。

按'Alt+F11'键,打开VB编辑器(或者按开发工具→VB编辑器)。

打开右边Module,按'Ctrl+F'查找"Refprop.DLL",并将其全部替换为"C:\Program Files\Refprop\Refprop.DLL",退出Excel,并保存。



The path marked "c:\..." must point exactly to the location where the REFPROP fluid and mixture

files are stored on the user's disk drive.

3. 保存REFPROP为Microsoft Office加载项

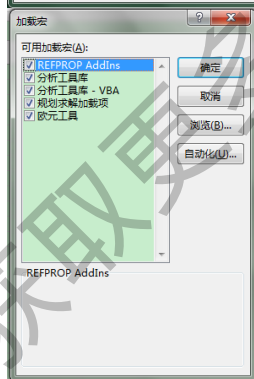
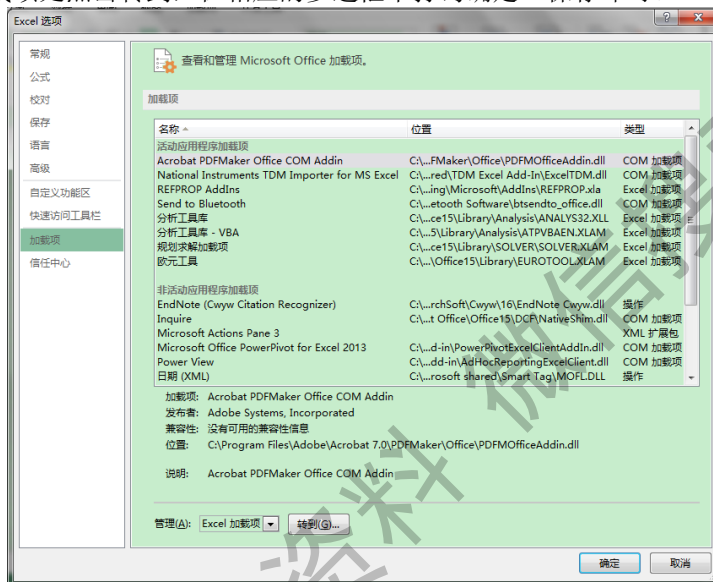
打开第2步保存的REFPROP.xls文件→”另存为……”，选择文件类型“Excel97-2003 加载宏 (*.xla)”，默认的文件地址会变为”...\Microsoft\AddIns”，保存。

若未出现默认地址，在C盘搜索”*.xla”，找到其所在文件夹，将保存的”REFPROP.xla”文件拷贝到该文件夹。

4. 添加加载项AddIn

打开一个空白Excel文件，在”工具”→”加载项管理器”中添加和激活'REFPROP AddIns'，确保其处于激活状态。

若在”工具”中未见到”加载项”，则可在”文件”→”选项”→”加载项”中选中'REFPROP AddIns'，在下面加载项处点击转到，在相应的多选框中打钩确定→保存即可。



5. 测试结果

打开一个新的EXCEL空白文件，在任意一个单元格输入

=density("water","TP","SI",500,100)

如果显示为数值。恭喜你，成功了！

如果显示错误，

- 1.检查输入公式是否正确 例如：是否有中文符号等；
- 2.在第2步中修改model中Refprop.dll文件时将前几行的
 Public Const FluidsDirectory As String = " fluids\
 Public Const MixturesDirectory As String = "mixtures\
 改为
 Public Const FluidsDirectory As String = "c:\program files\refprop\fluids\
 Public Const MixturesDirectory As String = "c:\program files\refprop\mixtures\
 并确保mixtures和fluids文件夹在c:\program files\refprop\中存在，即可。
3. 其他问题建议去看Refprop的help，写的还不错。

小伙伴们，勇敢的去尝试吧！！！！

附：常用函数举例

MolarMass("Air")
Temperature("argon","PD","SI",2,15)
Pressure("r134a","TD","SI",400,50)
Enthalpy("ethylene","TS","SI",300,3)
Viscosity("oxygen","TP","SI",100,1)
ThermalConductivity("nitrogen","Tliq","SI",100)
Density("air","TP","E",70,14.7)
Enthalpy("R32;0.3;R125;0.7","PS","molar si",10,110)
Temperature("ethane;0.5;butane;0.5 mass","DH","E",30,283)
SpeedOfSound("ammonia;0.4;water;0.6","TP","E",300,10000)
Density("r218;.1;r123;.9","PH","cgs",7,180)
Quality("methane;40;ethane;60 mass","TD","mks",200,300) kg/kg
Quality("methane;40;ethane;60 mass","TP","mks",200,2814.5509) *mass ratio*
Quality("methane;40;ethane;60 mass","TP","molar SI",200,2.8145509) *molar ratio*
HeatOfVaporization("octane","tliq","c",100)
SurfaceTension("nitrogen","tl","SI",100)
Viscosity("butane;.25;hexane;.75","TH","SI",300,-21)
ThermalConductivity("carbon dioxide,.5,nitrogen,.5 mass","TH","SI",200,126)
DielectricConstant("ethane;.5;propane;.5","tvap","SI",300)
MoleFraction("R410A.MIX",1)
mole2mass("R410A.MIX",1,A30,1-A30)
mass2mole("R410A.MIX",1,0.5,0.5)
LiquidDensity("methane;.7;ethane;.2;propane;.05;butane;.05","TD","SI",150,200)