KINTECH LABORATORY

From atoms and molecules –
to new materials and technologies

Chemical Workbench®4.2: what's new?

Reactor models

All models

1. NASA9 format support
2. Input of process rate, different from law of mass action (only for direct reactions)

Laminar flame models

1. New premixed laminar flame model:
   - adaptive mesh has no limitations on the mesh size and calculating area
   - precise model of multicomponent transport properties
   - fast calculation of sensitivity coefficients
   - automatic and manual assignment of initial approximation

Detonation and Shock wave models

1. Added incident and reflected shock waves models
2. Added ZND model
3. Updated Chapman-Jouget model

Thermo-chemical equilibrium models

1. New procedure of equilibrium state calculation in thermodynamic equilibrium reactors:
   - PT, VT (iso-thermal)
   - PH, VU (adiabathic)
   - PS, VS (isentropic)

GUI

New results tables and plots

1. Plotting graphs by context menu in results table
2. Flexible settings of graph view (font sizes, curve settings, legend)
3. Improved interface of sensitivity graphs
4. Automatic plotting of graphs will draw the most important components
5. Graph export settings

Calculation wizard

1. New calculation wizard

ChemKin converter

1. NASA9 format support
2. Selection of units at export to ChemKin format
3. General bugs fixed:
   - Diagnostics of wrong ChemKin files
   - Import of reactions with units for specific reaction

New license manager

1. Floating licenses support (license server, start of the license-allowed number of simulation from any computer in the network)
2. Support of licensing of CWB components: database, reactor models
3. Licensing of multithread calculations (for floating licenses)

Contacts
3rd Khoroshevskaya, 12
Moscow, 123298, Russia
☎ +7 (499) 704-25-81
sales@kintechlab.com
www.kintechlab.com