Introducing SMOSE

A tool for design and analysis of integrated energy systems
OSMOSE is a computation platform built to study and design energy systems. The functionalities of OSMOSE are organized in a three-layer architecture.
**Osmose1 main tasks**
- model interrogation
- cross-software communication
- superstructure generation

**Models architecture**
- Material and chemical balance
- Heat and power integration
- Thermo-economic performance

**Thermo-economical state of the system with optimal heat integration**
Osmose2 main tasks

- organize and handle computations
- results storage

Computation options

- Multi-objective optimization
- Sensitivity analysis
- Data reconciliation
- Model snapshot
- Semi-newton optimization

Results for energy system design decision makers
**Osmose3 main tasks**

- automated results analysis
- results and model sharing
- communication

**Features**

- Analysis and statistics
- Reporting
- Plotting
- Web service
- Models database

**Knowledge storage and sharing**

Wizard for results handling and analysis
Selected Publications


A Methodology for Thermo-Economic Modeling and Optimization of SOFC Systems / Palazzi, Francesca; Autissier, Nordahl; Maréchal, François; Van herle, Jan – In Chemical Engineering Transactions, vol. 7 (2005), p. 13-18


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