1. Record Nr. UNINA9910791020703321

Titolo	24th European Symposium on Computer Aided Process Engineering Part A / / edited by Jiri Jaromir Klemes, Petar Sabev Varbanov, Peng Yen Liew
Pubbl/distr/stampa	Amsterdam, Netherlands ; ; Oxford, [England] : , : Elsevier, , 2014 ©2014
ISBN	0-444-63443-6
Edizione	[First edition.]
Descrizione fisica	1 online resource (1966 p.)
Collana	Computer Aided Chemical Engineering, , 1570-7946 ; ; 33
Disciplina	660.28002854
Soggetti	Chemical process control - Data processing Chemical process control - Instruments Computer integrated manufacturing systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	e9780444634436pa.pdf; Front Cover; 24th European Symposium on Computer Aided Process Engineering; Copyright Page; Contents; Preface; International Scientific Committee; Local Organising Committee; Financial Risk Analysis in the Synthesis and Design of Processing Networks: Balancing Risk and Return; Abstract; 1. Introduction; 2. The framework for synthesis and design of processing networks; 3. Cost of capital; 4. Demonstration example: the Network Benchmarking Problem; 5. Conclusions and Future Works; References; De Novo Molecular Design using a Graph-Based Genetic Algorithm Approach; Abstract 1. Background2. Methodology; 3. Case Study; 4. Results and Conclusions; References; Assessment of Solvent Degradation within a Global Process Model of Post-Combustion CO2 Capture; Abstract; 1. Introduction; 2. Experimental study; 3. Model construction; 4. Simulation results; 5. Conclusions; Acknowledgements; References; A Cyclin Distributed Cell Cycle Model in GS-NS0; Abstract; 1. Introduction; 2. Experimental set-up and Mathematical model; 3. Results and Discussion; 4. Conclusions and Future work; Acknowledgements; References

The Good, the Bad, and Your Real Choices - Decision Support for Energy Systems Synthesis through Near-Optimal Solutions AnalysisAbstract; 1. Introduction; 2. Decision support through near-optimal solutions analysis; 3. Industrial synthesis problem; 4. District synthesis problem; 5. Conclusions; Acknowledgements; References; Achieving More Sustainable Designs through a Process Synthesis-Intensification Framework; Abstract; 1. Introduction; 2. Process Synthesis-Intensification Framework; 3. Case Study; 4. Conclusions; References
Superstructure Development and Optimization under Uncertainty for Design and Retrofit of Municipal Wastewater Treatment PlantsAbstract; 1. Introduction; 2. Framework for synthesis and design of WWTP networks under uncertainty; 3. Case Study: Benchmark Wastewater Treatment Plant; 4. Conclusions and Future Works; References; Scale-up and Techno-economical Study for the Production of Polyesters from Glycerol; Abstract; 1. Introduction; 2. Methodology; 3. Results; 4. Conclusions; Acknowledgments; References; Uncertainty Analysis in Raw Material and Utility Cost of Biorefinery Synthesis and Design Abstract1. Introduction; 2. Framework; 3. Uncertainty analysis of a superstructure-based optimization; 4. Conclusion; References; Rigorous Optimization-based Synthesis of Distillation Cascades without Integer Variables; Abstract; 1. Introduction; 2. A New Distillation Model; 3. Example 1 - A Single Idealized Cascade ; 4. Example 2 - Cryogenic Air Separation Unit Synthesis ; 5. Conclusions; Acknowledgments; References; The Virtual Product-Process Design Laboratory for Structured Chemical Product Design and Analysis; Abstract; 1. Chemical Product Design; 2. The Generic Workflow
3. The Templates

Sommario/riassunto

The 24th European Symposium on Computer Aided Process Engineering creates an international forum where scientific and industrial contributions of computer-aided techniques are presented with applications in process modeling and simulation, process synthesis and design, operation, and process optimization. The organizers have broadened the boundaries of Process Systems Engineering by inviting contributions at different scales of modeling and demonstrating vertical and horizontal integration. Contributions range from applications at the molecular level to the strategic level of the supply cha