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 3. Simulated Annealing with Simplex Method; 3.1. Introduction; 3.2. SA-S/1 algorithm; 3.3. Important mechanisms of SA-S/1 algorithm; 3.3.1. Initial simplex generation; 3.3.2. Determination of the initial temperature; 3.3.3. Acceptance criterion; 3.3.4. Cooling scheme-Temperature decrease; 3.3.5. Equilibrium criterion; 3.3.6. Stopping (convergence) criterion; 4. Tests, Control Parameters Settings and Important Application Issues; 4.1. Tests-Test problems and results; 4.2. Parameter settings for SA-S/1 algorithm; 4.2.1. Cooling scheme; 4.2.2. Influence of parameter INV
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Sommario/riassunto

Optimization has played a key role in the design, planning and operation of chemical and related processes, for several decades. Global optimization has been receiving considerable attention in the past two decades. Of the two types of techniques for global optimization, stochastic global optimization is applicable to any type of problems having non-differentiable functions, discrete variables and/or continuous variables. It, thus, shows significant promise and potential for process optimization. So far, there are no books focusing on stochastic global optimization and its applications in chem