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Sommario/riassunto

Membrane reactors combine membrane functions such as separation, reactant distribution, and catalyst support with chemical reactions in a single unit. The benefits of this approach include enhanced conversion, increased yield, and selectivity, as well as a more compact and cost-effect design of reactor system. Hence, membrane reactors are an effective route toward chemical process intensification. This book covers all types of porous membrane reactors, including ceramic, silica, carbon, zeolite, and dense metallic reactors such as Pd or Pd-alloy, oxygen ion-conducting, and proton-conducting