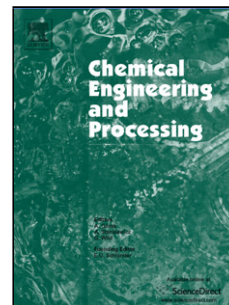


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Authors: Jeffrey A. Weinfeld, Scott A. Owens, R. Bruce Eldridge



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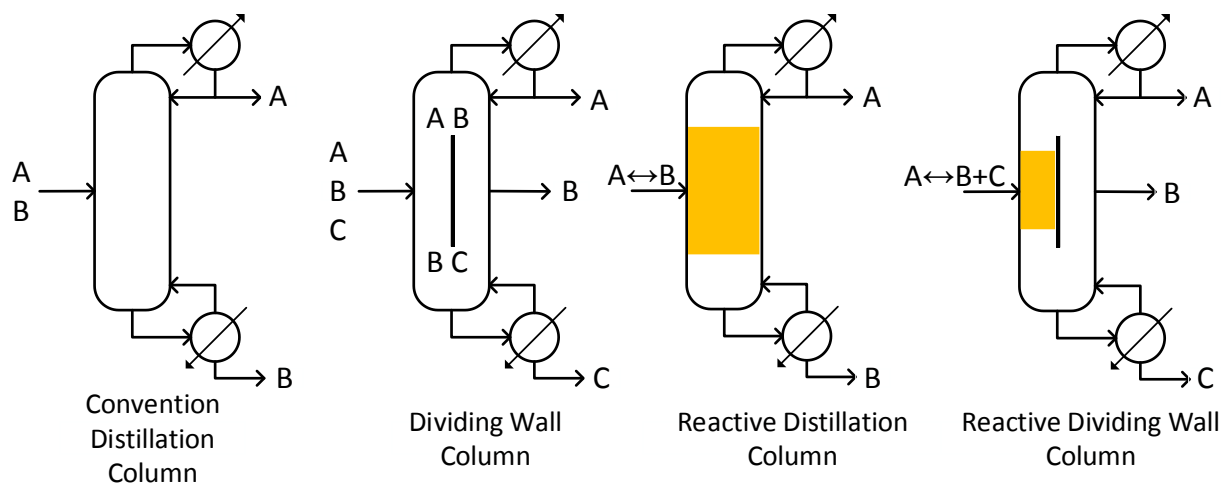
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Reactive Dividing Wall Columns: A Comprehensive Review

Jeffrey A. Weinfeld^a, Scott A. Owens^b, R. Bruce Eldridge^{a,*}^a Process Science Technology Center, The University of Texas at Austin, Austin, TX 78681, United States^b Eastman Chemical Company, Kingsport, TN 37660, United States

Graphical abstract



Highlights:

- A comprehensive review of experimental, modeling, and dynamic control studies on reactive dividing wall distillation columns
- Current simulation literature leads to the conclusion that reactive dividing wall columns are industrially feasible with the potential to save between 15 percent and 75 percent energy and at least 20 percent capital cost compared to conventional processes
- Research gaps preventing commercialization of these columns are highlighted

Abstract

Reactive dividing wall columns (RDWCs) are highly integrated systems that can simultaneously perform chemical reactions and multicomponent separations within the same vessel. While reactive distillation columns (RDCs) are well established and dividing wall columns (DWCs) are becoming increasingly popular in chemical processes due to their ability to present significant capital and operating costs

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