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## Review and classification of recent observers applied in chemical process systems

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### Abstract

Observers are computational algorithms designed to estimate unmeasured state variables due to the lack of appropriate estimating devices or to replace high-priced sensors in a plant. It is always important to estimate those states prior to developing state feedback laws for control and to prevent process disruptions, process shutdowns and even process failures. The diversity of state estimation techniques resulting from intrinsic differences in chemical process systems makes it difficult to select the proper technique from a theoretical or practical point of view for design and implementation in specific applications. Hence, in this paper, we review the applications of recent observers to chemical process

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