

직접화 통합화 하이브리드화 고도 증류: 지속가능 화학공정으로 가는 길

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The development of the industrial systems for the year 2050 has been well defined in the recent Research Agenda with many strategic sectors, such as water, energy, food, health, etc. The drive towards greater sustainability has prompted process industries to search for opportunities to decrease their production costs, energy consumption, equipment size, and environment impact as well as improve the raw material yields, remote control, and process flexibility. Distillation process as a dominant player among all separation technologies are typically energy and cost intensive. One of the major challenges in distillation process industry is thus to improve the energy efficiency of existing and/or new processes through economic and ecological strategies. Integration, intensification and hybrid approach of distillation have become the main trend to achieve green and sustainable chemical process. This presentation will review briefly applications and trend of integration, intensification, and hybrid of distillation processes with their optimization. The potential and reliability of these technologies are addressed briefly, and the recent developments in current research are summarized.