

Process Intensification of Industrial Biocatalysis – how to scale up without huge reactor volumes

Abstract:

Industrial biocatalysis has many sustainability advantages including lower energy requirements, more environmentally acceptable process fluids and less waste. However, the large scale implementation can look uneconomic due to the dilute nature of the process which requires very large reactor volumes. Applying process intensification techniques and adopting continuous manufacturing technologies can significantly reduce the size of the processing equipment. We will present a number of case studies where Coflore technology has proved to be a scaleable, bioprocess intensification technique for slow processes, often with multi-phases, including combinations of solid, liquid and gas.

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