Special Issue

Mass Transfer in Multiphase Reactors

Message from the Guest Editor

Mass transfer (MT) is the most important process in multiphase reactors. In many applications in the chemical industry, the MT time determines the operational time of the multiphase reactors. The successful prediction of the MT coefficients under various operating conditions is a challenging task. The effects of various parameters (including gas and liquid mixing) should be taken into account. A thorough investigation of the effects of both liquid turbulence and catalyst particles on the MT enhancement is required. Last but not least, the presence of a chemical reaction (especially a complex one) changes the MT conditions and the bubble shape and behavior and the process should be well modeled. Especially interesting are multiphase reactors operated with foaming systems (for instance aqueous alcohol solutions). This Special Issue is focused on these scientific problems.

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