

Institute of Chemical Engineering

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Theory of multicomponent diffusion in fluid systems

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Abstract: The aim of the study is to present in detail the constitutive equations of multicomponent diffusion de-rived on the basis of the mechanical theory of multicomponent diffusion. Various formulations of the diffusion driving force have been compared (generalized Maxwell-Stefan, generalized Fick-Onsager equations). Other theories of the multicomponent diffusion (nonequilibrium thermodynamics, statistical mechanics) have been also discussed.

Attachments:

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