

Institute of Chemical Engineering

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Theory of multicomponent diffusion in fluid systems

Publication date:	29.12.2016
Publication title:	Theory of multicomponent diffusion in fluid systems
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Journal information:	Prace Naukowe Instytutu Inżynierii Chemicznej Polskiej Akademii Nauk
Tags:	mechanical theory of multicomponent diffusion , generalized maxwell-stefan equation , generalized fick-onsager equation , nonequilibrium thermodynamics , statistical mechanics

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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Created at:	04.08.2025
Published by:	Artur Wojdyła
Published at:	05.08.2025 08:19
Number of downloads:	366

Tagi: mechanical theory of multicomponent diffusion, generalized maxwell-stefan equation, generalized fick-onsager equation, nonequilibrium thermodynamics, statistical mechanics

Metryczka

Published by:	Artur Wojdyła
Published at:	18.09.2025 13:14
Number of views:	129