MAE 221B
Comparison of Notation Class Notes (JDG) and BSL [1]

Quantity	units	JDG	BSL
"Q" density	Q/V	ϱ_Q	-
"Q" flux	$Q/A{\cdot}t$	$\boldsymbol{\varphi}_Q$	various
"Q" generation	$Q/V{\cdot}t$	γ_Q	-
Specific "Q" $(V, U, H, S, \ldots)$	Q/M	q $(v, u, h, s \ldots)$	$\hat{Q}$ $(\hat{V}, \hat{U}, \hat{H}, \hat{S} \ldots)$
total mass density	M/V	ρ	ρ
total mass flux	$M/A{\cdot}t$	$\boldsymbol{\varphi}$	$\mathbf{n}$
momentum density	$M/A{\cdot}t$	$\varrho_{\mathbf{p}} = \boldsymbol{\varphi}$	-
stress tensor	F/A	$\mathbf{T}$=- $\boldsymbol{\varphi}_{\mathbf{p}}$	$-\boldsymbol{\tau}$
mass density, species α	M/V	ρ_α	ρ_α
molar density, species α	$Mols/V$	$\hat{\rho}_\alpha$	c_α
total molar density	$Mols/V$	$\hat{\rho}$	c
mass flux α	$M/A{\cdot}t$	$\boldsymbol{\varphi}_\alpha$	$\mathbf{n}_\alpha$
total molar flux	$Mols/A{\cdot}t$	$\hat{\boldsymbol{\varphi}}$	$\mathbf{N}$
molar flux α	$Mols/A{\cdot}t$	$\hat{\boldsymbol{\varphi}}_\alpha$	$\mathbf{N}_\alpha$
mass generation α	$M/V{\cdot}t$	$\gamma_\alpha = r_\alpha$	$\mathcal{M}_\alpha R_\alpha$
molar generation α	$Mols/V{\cdot}t$	$\hat{\gamma}_\alpha = \hat{r}_\alpha$	R_α
mass fraction α	-	$m_\alpha = x_\alpha$	ω_α
mol fraction α	-	$\hat{m}_\alpha = \hat{x}_\alpha$	x_α
diffusional mass flux α	$M/A{\cdot}t$	$\mathbf{j}_\alpha = \boldsymbol{\varphi}_\alpha - x_\alpha \boldsymbol{\varphi}$	$\mathbf{j}_\alpha$
molar diffusional flux α	$Mols/A{\cdot}t$	$\hat{\mathbf{j}}_\alpha = \hat{\boldsymbol{\varphi}}_\alpha - \hat{x}_\alpha \hat{\boldsymbol{\varphi}}$	$\mathbf{J}^*_\alpha$

[1] Bird, R.B., Stewart, W. and Lightfoot, E.N.,"Transport Phenomena", 2nd ed., Wiley,2000