Variable/ parameter	Description	Unit
$\boldsymbol{n}$	copy number of cellular compounds	mol
$\boldsymbol{c}$	concentration of cellular compounds	$\text{mol}L^{-1}$
$\boldsymbol{x}$	concentration of metabolites	$\text{mol}L^{-1}$
$\boldsymbol{e}$	concentration of enzymes	$\text{mol}L^{-1}$
r	concentration of ribosome	$\text{mol}L^{-1}$
α_j	ribosomal fraction allocated to produce enzyme/ribosome	n.a.
N	overall stoichiometric matrix	n.a.
P	metabolic stoichiometric matrix	n.a.
M	metabolite-to-enzyme stoichiometric matrix	n.a.
I	identity matrix	n.a.
μ	growth rate	s^{-1}
ρ_k	volumetric parameter for metabolic compound k	$\text{mol}^{-1}L$
σ_k	volumetric parameter for enzymes and ribosome	$\text{mol}^{-1}L$
f_j	enzymatic rate law	s^{-1}
g_j	enzyme synthesis rate law	s^{-1}
v_j	metabolic rate	$\text{mol}L^{-1}s^{-1}$
w_j	enzyme synthesis rate	$\text{mol}L^{-1}s^{-1}$
a_j	net contribution to growth rate by metabolic reaction j	$\text{mol}^{-1}L$
b_j	net contribution to growth rate by enzyme/ribosome synthesis reaction j	$\text{mol}^{-1}L$
$\mathcal{C}_{\boldsymbol{x},\mu}$	cone corresponding to metabolite concentration $\boldsymbol{x}$ and growth rate μ	n.a.
$\mathcal{P}_{\boldsymbol{x},\mu}$	polytope corresponding to metabolite concentration $\boldsymbol{x}$ and growth rate μ	n.a.
$\boldsymbol{u}_j$	j-th elementary unit vector	n.a.

Table 1: Overview of all variables and parameters used in this paper.