

Table S1 Global sensitivity analysis results for compactness.

\hat{p}	12	13	14	15
Variance data	0.0453	0.0453	0.0453	0.0453
Variance PCE	0.0452	0.0453	0.0454	0.0456
$S(\lambda_c)$	0.3190	0.3188	0.3186	0.3183
$S(D)$	0.2971	0.2969	0.2965	0.2958
$S(\lambda_A)$	0.0267	0.0266	0.0266	0.0265
$S(J_{\text{cell,cell}})$	0.2052	0.2048	0.2043	0.2032
$S(\lambda_c, D)$	0.0124	0.0125	0.0126	0.0127
$S(\lambda_c, \lambda_A)$	0.0107	0.0107	0.0109	0.0110
$S(\lambda_c, J_{\text{cell,cell}})$	0.0558	0.0559	0.0561	0.0570
$S(D, \lambda_A)$	0.0016	0.0017	0.0017	0.0017
$S(D, J_{\text{cell,cell}})$	0.0127	0.0127	0.0127	0.0126
$S(\lambda_A, J_{\text{cell,cell}})$	0.0102	0.0102	0.0102	0.0101
$S(\lambda_c, D, \lambda_A)$	0.0098	0.0102	0.0104	0.0107
$S(\lambda_c, D, J_{\text{cell,cell}})$	0.0253	0.0257	0.0262	0.0268
$S(\lambda_c, \lambda_A, J_{\text{cell,cell}})$	0.0214	0.0217	0.0220	0.0225
$S(D, \lambda_A, J_{\text{cell,cell}})$	0.0073	0.0075	0.0076	0.0078