**Table S1. List of variables and parameters used in the model for MT dynamics.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Definition** | | **Units** | |
| *t* | time | s. | |
| *X(+,t)* | Position of the plus end at time *t* | μm | |
| *X(-,t)* | Position of the minus end at time *t* | μm | |
|  | Growth duration (plus/minus MT ends) | s. | |
|  | Shrinkrage duration (plus/minus MT ends) | s. | |
|  | Pause duration (plus/minus MT ends) | s. | |
|  | Position of the plus/minus seed end | μm | |
| **Parameter** | **Definition** | | **Units** | | **Value** |
|  | Growth rate, (+) end | | μm.s-1 | | 2.6x10-2 |
|  | Growth rate, (-) end | | μm.s-1 | | 8.8x10-3 |
|  | Shrinkage rate, (+) end | | μm.s-1 | | 2.4x10-1 |
|  | Shrinkage rate, (-) end | | μm.s-1 | | 6.7x10-1 |
|  | Average duration, growth phase, (+) end. | | s. | | 210 |
|  | Average duration, shrinkage phase, (+) end. | | s. | | 28 |
|  | Average duration, pause phase, (+) end. | | s. | | 0 |
|  | Average duration, growth phase, (-) end. | | s. | | 280 |
|  | Average duration, shrinkage phase, (-) end. | | s. | | 15 |
|  | Average duration, pause phase, (-) end. | | s. | | 110 |