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- You should state whether an appropriate sample size was computed when the study was being designed
- You should state the statistical method of sample size computation and any required assumptions
- If no explicit power analysis was used, you should describe how you decided what sample (replicate) size (number) to use

Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn't apply to your submission:

All detailed experimental methods, including the sample size sample used, are described in the "Materials and Methods" manuscript and in the figure legends.	

Replicates

- You should report how often each experiment was performed
- You should include a definition of biological versus technical replication
- The data obtained should be provided and sufficient information should be provided to indicate the number of independent biological and/or technical replicates
- If you encountered any outliers, you should describe how these were handled
- Criteria for exclusion/inclusion of data should be clearly stated
- High-throughput sequence data should be uploaded before submission, with a private link for reviewers provided (these are available from both GEO and ArrayExpress)

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Statistical reporting

- Statistical analysis methods should be described and justified
- Raw data should be presented in figures whenever informative to do so (typically when N per group is less than 10)
- For each experiment, you should identify the statistical tests used, exact values of N, definitions of center, methods of multiple test correction, and dispersion and precision measures (e.g., mean, median, SD, SEM, confidence intervals; and, for the major substantive results, a measure of effect size (e.g., Pearson's r, Cohen's d)
- Report exact p-values wherever possible alongside the summary statistics

and 95% confidence intervals. These should be reported for all key questions and not only when the p-value is less than 0.05.
Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn't apply to your submission:
All this information about the significance of the statistics including the number of tilt series datasets, the number of subtomograms used for the average, the average and the standard deviations of the measured A-, B- and C-tubule length in the procentrolei are stated in the main text and in the "Materials and Methods" section, in the figure legends and in the supplemental figures of the manuscript.
(For large datasets, or papers with a very large number of statistical tests, you may upload a single table file with tests, Ns, etc., with reference to sections in the manuscript.)
 Group allocation Indicate how samples were allocated into experimental groups (in the case of clinical studies, please specify allocation to treatment method); if randomization was used, please also state if restricted randomization was applied Indicate if masking was used during group allocation, data collection and/or data analysis
Please outline where this information can be found within the submission (e.g., sections or figure legends), or explain why this information doesn't apply to your submission:
As a routing practice used in cryoEM, masks with different sizes and shapes were

As a routine practice used in cryoEM, masks with different sizes and shapes were used in the data processing, such as in the different stages in the subtomogram averaging. The potential artifacts that might be introduced by these masks are routinely analyzed and avoided by well established procedures implemented in

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the work. They are described in the manuscript.



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Additional data files ("source data")

- We encourage you to upload relevant additional data files, such as numerical data that are represented as a graph in a figure, or as a summary
- Where provided, these should be in the most useful format, and they can be uploaded as "Source data" files linked to a main figure or table
- Include model definition files including the full list of parameters used
- Include code used for data analysis (e.g., R, MatLab)
- Avoid stating that data files are "available upon request"

Please indicate the figures or tables for which source data files have been provided:

A set of Fourier Shell Correlation plots, used routinely by cryoEM to assess the resolution, have been included as "Supplemental Figure 1" in the manuscript. numbers of subtomogram used in the experiments are summarized in a supplemental table (Table S1).	