**Title**

Source data for the publication: Enhancement of microalgae growth using magnetic artificial cilia

**Description**

This data set contains the source data of the publication: Verburg, T. H. C. M., Schaap, A. M., Zhang, S., den Toonder, J. M. J., & Wang, Y. (2021). Enhancement of microalgae growth using magnetic artificial cilia. Biotechnology and Bioengineering. <https://doi.org/10.1002/bit.27756>. In this study, we fabricated magnetic artificial cilia (MAC) and implemented them in millimeter scale culture wells and conducted growth experiments with Scenedesmus subspicatus while actuating the MAC in a rotating magnetic field to create flow and mixing. In addition, surface of MAC was made hydrophilic using plasma treatment and its effect on growth was compared with untreated, hydrophobic MAC. The experiments showed that the growth was enhanced by ten and two times with hydrophobic and hydrophilic MAC, respectively, compared with control groups which contain no MAC. The data are experimentally obtained with methods described in the publication.

**Format**

Publication: .pdf

Data: .csv

Other: .docx, .txt

**Open access**

Published open access under licence CC-BY-NC-ND

**Funding**

833214

**Organization**

TU Eindhoven, Department of Mechanical Engineering