## Text S1

Specific methods for detecting granule size, extracellular polymeric substances (EPS) content, 3D-EEM fluorescence spectrum of EPS, chlorophyll (Chl) content, and glycogen content of MBGS.

The granule size of MBGS was analyzed using ImageJ 1 on photographic images. The extracellular polymeric substances (EPS) content was achieved by thermal extraction, and the contents of protein (PN) and polysaccharide (PS) were quantified using a modified rapid Lowry protein content kit (PRL002000, Shanghai Lanfan Biotechnology Co., Ltd., China) and a sulfuric acid-anthracene ketone colorimetric method, respectively. 3D-EEM fluorescence spectra of EPS were subsequently analyzed by fluorescence spectroscopy (F-7100, Hitachi High-Technology Corp., Japan). Chlorophyll (Chl) content was determined by acetone extraction, while glycogen content was detected by a glycogen assay kit (YX-C-B603, Shanghai Preferred Biotechnology Co., Ltd, China).