Microalgae: from biodiversity and ecological services to biotechnologies and innovations

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The oceans are renowned for their contribution to pumping atmospheric production of CO2 and oxygen. These crucial roles are provided by microscopic photosynthetic organisms and primarily by a myriad of cyanobacteria and microalgae, even if most have yet to be formally described. These microscopic photosynthetic organisms share an essential property - great metabolic flexibility - allowing them to occupy most ecological niches, even the most extreme or improbable. At the cellular level, metabolic flexibility results in the accumulation of a wide variety of biomolecules, some of them of commercial interest. Blue biotechnology is a branch of biotechnology based on the application of science and technology to living aquatic organisms, including microalgae, for the production of knowledge, goods and services. The session 'Microalgae: from biodiversity and ecological services to biotechnologies and innovations' was designed to present the latest data on microalgae biology and relate them to biotechnological processes.