



Adrien Burlacot

Assist Prof (By Courtesy), Biology

Bio

BIO

Adrien Burlacot is an algal physiologist specialized in the study of photosynthesis and bioenergetics of algal cell. Adrien is a physicist by training, he received a BS and MSc in Engineering from the Ecole polytechnique (France) and a MSc in Plant Biology from the University of Paris-Saclay (France). He then obtained a PhD in Plant Science at the CEA Cadarache (France) from the Aix-Marseille University (France) where he studied the regulations of the photosynthetic electron flow in green microalgae. After a postdoctoral position in 2021 at the University of California, Berkeley (USA) with Krishna K. Niyogi where he studied photoprotection in plants and algae, he started his lab at the Carnegie Institution for Science at Stanford on fall 2021.

Microalgal photosynthesis is fixing annually ten times more CO₂ than what humans reject. Acclimation to abiotic stress is a major driving force of microalgal community structure and productivity. Adrien investigates how microalgal photosynthesis dynamically acclimates to fluctuations in environmental parameters like light, CO₂ or temperature. He will be using and developing high throughput screens based on quantitative chlorophyll fluorescence to understand the dynamics of photosynthesis. Adrien aims at unravelling the network of photosynthesis acclimatory genes and their bioenergetic role in the cell. He wants to use this knowledge and the new tools developed to propose new ways of harnessing photosynthesis for a more sustainable world.