

Day 1 – Monday 15th of June

09:30 – 10:00	Registration, welcome refreshments
10:00 – 10:15	Introduction and welcome by Lorentz Center
10:15 – 10:30	Introduction by the workshop organizers
10:30 – 11:15	Group discussion: “Open questions and goals of this workshop” <i>The aim of this group discussion is to clarify the essential open questions that the participants would like to discuss during the workshop. This will primarily be based on the pre-workshop topic identification questionnaire. Participants are split into groups to discuss this for 25 minutes, and then findings are reported back to the whole workshop.</i>
11:15 – 12:00	Tutorial on chlorophyll biosynthesis & photosystem biogenesis
12:00 – 13.30	Lunch
13:30 – 14:20	2x talks <ol style="list-style-type: none"> 1. Talk (25+5) 2. Structural characterization of the super-rogue photosystem II complex involved in chlorophyll f biosynthesis (15+5)
14:20 – 15:05	Tutorial on molecular mechanisms of pigment red-shifts
15:05 – 15:35	Coffee break
15:35 – 16:45	3x talks <ol style="list-style-type: none"> 1. Talk (25+5) 2. From <i>F. albivenis</i> to Vascular Plants: How LHCI tunes Far-Red Light Harvesting (15+5) 3. Engineering photosystem II to bind chlorophyll f (15+5)
16:45 – 17:00	Recap with open mic for workshop participants to evaluate the relevant open questions related to the topics of the day
17:00 – 19:00	Welcome reception by Lorentz Center

Day 2 – Tuesday 16th of June

09:00 – 9:30	Welcome coffee and tea
09:30 – 10:30	Plenary panel discussion on “ Chlorophyll biosynthesis and molecular mechanisms of red-shifts ”. Panel style discussion with experts mediated by a talk show-style host. There will be an open mic for the audience to intervene/ask questions to the experts.
10:30 – 11:00	Coffee break
11:00 – 12:00	Breakout session: “ Chlorophyll biosynthesis, and the molecular mechanisms of red-shifts ” <i>Participants are split into small groups in multiple parallel breakout rooms that are divided into the two topics. Participants can choose which topic area they wish to join. The idea is to have free-hand discussion of bold ideas and experimental designs to tackle the problems identified in the plenary panel discussions.</i>
12:00 – 13:30	Lunch
13:30 – 14:15	Recap with one member from each breakout room to report back on interesting ideas generated in the breakout rooms. Open mic for workshop participants to ask questions.
14:15 – 15:00	Tutorial on Bioenergetic trade-offs
15:00 – 15:30	Coffee break
15:30 – 16:50	4x talks related to the topic of bioenergetic trade-offs. <ol style="list-style-type: none"> 1. Insights on Far-Red PSI reaction centre functionality via EPR and ODMR spectroscopies (15+5) 2. Enhanced carotenoid photoprotection in Far-Red light acclimated <i>Chroococcidiopsis thermalis</i> (15+5) 3. Harnessing Far Red Light Photoacclimation in Strategic Cocultures of Cyanobacteria (15+5) 4. Recoloring plant photosystem-II: Optimizing light harvesting for far-red photons (15+5)
16:50 – 17:05	Day recap with open mic for workshop participants to participate

Day 3 – Wednesday 17th of June

09:00 – 9:30	Welcome coffee and tea
09:30 – 10:30	Plenary panel discussion on “ Bioenergetic trade-offs ”. Panel style discussion with experts mediated by a talk show-style host. There will be an open mic for the audience to intervene/ask questions to the experts.
10:30 – 11:00	Coffee break
11:00 – 12:00	Breakout session: “ Bioenergetic trade-offs ” <i>Participants are split into small groups in multiple parallel breakout rooms that are divided into the two topics. Participants can choose which topic area they wish to join. The idea is to have free-hand discussion of bold ideas and experimental designs to tackle the problems identified in the plenary panel discussions.</i>
12:00 – 13:30	Lunch
13:30 – 14:15	Tutorial on Diversity of far-red photosynthesis
14:15 – 14:45	1x talk 1.) Talk (25+5)
14:45 – 15:05	Coffee break
15:05 – 15:45	2x talks 1.) Harnessing Far-Red Light-Utilizing Cyanobacteria: Detection, Ecology, and Bioengineering (15+5) 2.) Unexpected slow-down of oxygen evolution kinetics in far-red adapted Photosystem II (15+5)
15:45 – 16:15	Recap with one member from each breakout room to report back on interesting ideas generated in the breakout rooms. Open mic for workshop participants to ask questions.
18:00 – 22:00	Boat Tour + Conference Dinner

Day 4 – Thursday 18th of June

09:00 – 9:30	Welcome coffee and tea
09:30 – 10:20	2x talks 1.) Talk (25+5) 2.) Early evolution of far-red light photoacclimation in cyanobacteria (15+5)
10:20 – 11:00	Coffee break
11:00 – 12:00	Plenary panel discussion on “Diversity of far-red light photosynthesis” . Panel style discussion with experts from disparate backgrounds, mediated by a talk show-style host. There will be an open mic for the audience to intervene/ask questions to the experts.
12:00 – 13:30	Lunch
13:30 – 15:30	Group Discussion: “White-paper drafting” <i>Breakout rooms are organised according to the themes covered during the workshop. In the breakout rooms the participants will discuss which elements should be present in the white paper regarding their theme. Specifically they will be tasked to clearly formulate the key challenges that need to be overcome in the field, and identify the disciplines and collaborations that are needed to tackle them. Finally they are asked to establish a roadmap for the field in the future.</i>
15:30 – 16:00	Coffee break
16:00 – 16:30	Day recap with open mic for workshop participants to participate.

Day 5 – Friday 19th of June

09:00 – 9:30	Welcome coffee and tea
9:30 – 10:00	Recap of the workshop so far – <i>short summary detailing the key points that have been discussed so far.</i>
10:00 – 12:00	Breakout session: White-paper expansion <i>The aim of this breakout session is to expand upon the initial work from the day before. Participants rejoin with their breakout groups. The aim is for each room to produce a small piece of text and a presentation detailing the key identified challenges, the experiments that need to be conducted to overcome them and a roadmap for the field for the future.</i>
12:00 – 13:30	Lunch
13:30 – 14:30	Group discussions: White paper presentations <i>The aim of this group discussion is to present the outcomes of the breakout session before lunch. One or two early career representatives from each breakout room can present their ideas in a short presentation (~10 mins) to the group.</i>
14:30 – 15:30	Workshop wrap up and perspectives for the future.