

SFB
1078



Protonation Dynamics
in Protein Function

International Phytochrome Workshop 2023

Collaborative Research Center – SFB 1078

Protonation Dynamics in Protein Function

October 10-12th, 2023

Fachbereich Physik, Freie Universität Berlin

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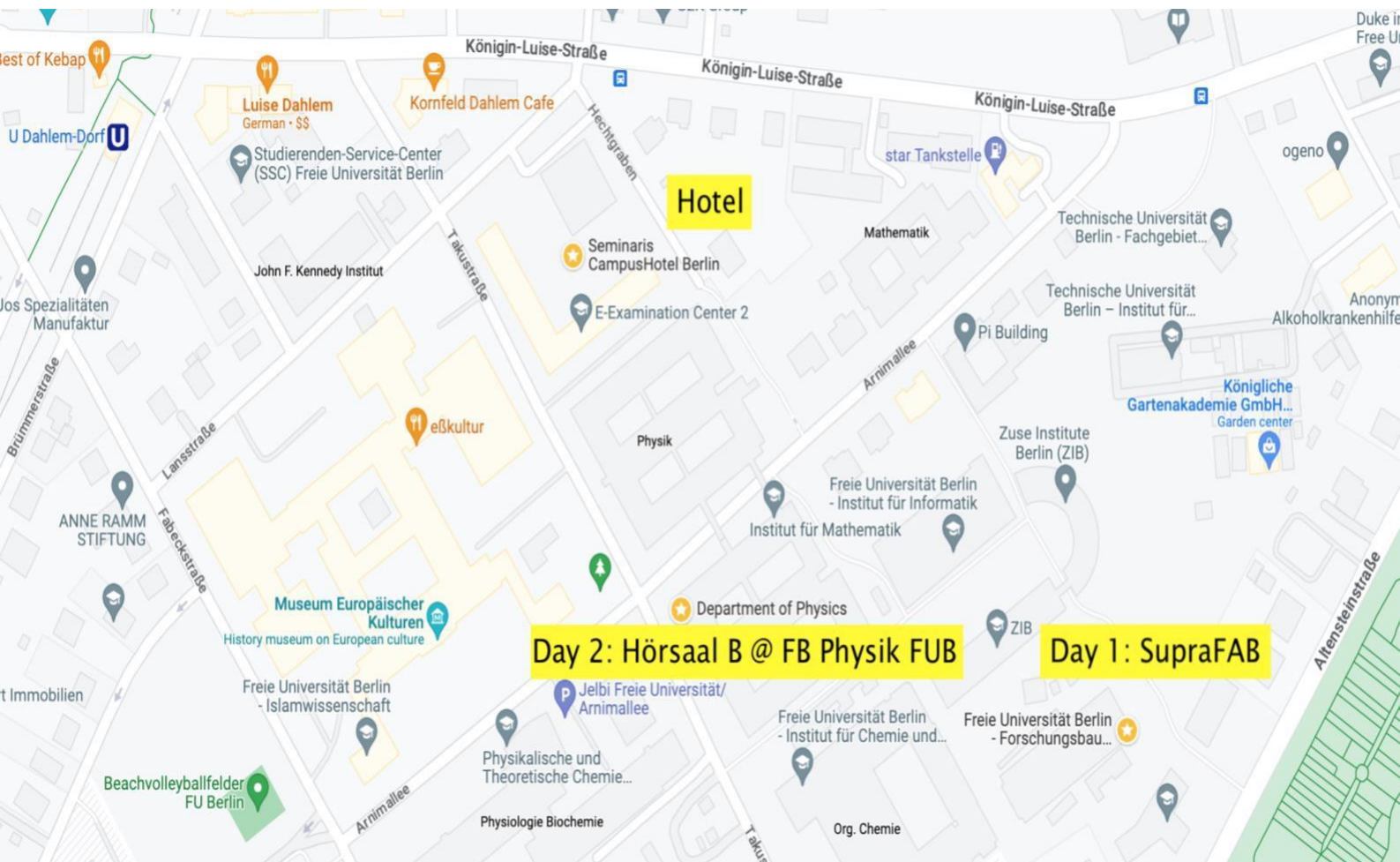
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Location

Day 1: **SupraFab**
Altensteinstra w 23a
14195 Berlin

Day 2: **H rsaal B, FB Physik FUB**
Arnimallee 14
14195 Berlin

Hotel: **Seminaris CampusHotel Berlin**
Takustra e 39
14195 Berlin



Program

Tuesday, October 10, 2023

17:30-21:30 **Welcome Reception at the SupraFab, Room 201**

- 17:30-18:00 **Drinks**
Welcome reception
- 18:00-19:15 **Snacks**
Finger food, canapes and warm soups
- 19:15-19:30 **Welcome address**
Maria Andrea Mroginski, Patrick Scheerer
- 19:30-20:30 **Evening talk by Clark Lagarias**
Bilins in Context: More Than Light Sensing

Wednesday, October 11, 2023

09:30-18:30 **Hörsaal B at the FU Physics Department**

SESSION 1

9:30 – 11:10

Chair: Patrick Scheerer

- 09:30 **Tilman Lamparter** (30 min)
Photophobotaxis of Phormidium lacuna, a filamentous cyanobacterium
- 10:00 **Reinhard Fischer** (30 min)
Photoreceptor functions in fungi
- 10:30 **Ulrike Alexiev** (20 min)
Phytochromes: proton release and uptake kinetics and hydration sensitivity
- 10:50 **Karsten Heyne** (20 min)
Ultrafast protein reaction in phytochromes

11:10 *Coffee break*

Cafeteria

Room 1.1.25

SESSION 2

11:40 – 13:00

Chair: Manal Ibrahim

- 11:40 **John Kennis** (30 min)
Facile two-photon excitation and photoionization in phytochrome: implications for time-resolved crystallography and spectroscopy
- 12:10 **Katrina Forest** (30 min)
Investigating the Phytochrome Knot
- 12:30 **Galaan Merga** (20 min)
FTIR studies on the phytochrome Agp1 Photocycle

13:00 *Lunch*

SESSION 3

14:00 – 15:20

Chair: Patrick Scheerer

- 14:00 **Nicole Frankenberg** (30 min)
Bacterial bathy phytochromes are sensors of farred light and darkness
- 14:30 **Maria Andrea Mroginski** (20 min)
Role of W496 in Cyanobacteriochrome SI139
- 14:50 **Soshi Nagano** (20 min)
Y176H: A Janus mutant with high fluorescence

15:20 *Coffee break**Cafeteria*

Room 1.1.25

SESSION 4

15:40 – 17:00

Chair: Maria Mroginski

- 15:40 **Jimena Rinaldi** (30 min)
Structural bases of the light sensing in the phytopathogen Xanthomonas campestris. Long-range signaling mechanism of a bacteriophytochrome
- 16:10 **Janne Ihalainen** (30 min)
Bacterial phytochrome function - combining spectroscopic information with activity studies
- 16:40 **Luisa Herder** (20 min)
Structural insights into a red-light photoreceptor
- 17:00- 18:30 Poster Session

20:00 *Dinner at Weihenstephaner Lichterfelde***Hans-Sachs-Straße 5, 12205 Berlin****Public transportation:****19:38** U-Dahlem DorfBus **M11 S** Schöneeweide**19:44** Lichterfelde West

Thursday, October 12, 2023

09:00-14:00 Hörsaal B at the FU Physics Department

SESSION 5

9:00-10:40

Chair: Manal Ibrahim

9:00 **Emina Stojković** (30 min)
High-resolution crystal structures of transient intermediates in the phytochrome photocycle

9:30 **Andreas Winkler** (30 min)
Signal integration and conformational dynamics of dark- and light-state locked bacteriophytochrome variants

10:00 *Coffee break*

Cafeteria
Room 1.1.25

SESSION 6

10:30-11:30

Chair: Patrick Scheerer & Maria Mroginski

10:30 **Hartmut Oschkinat** (20 min)
New insights on the photocycle of phytochrome Agp1

11:00 **Jon Hughes** (20 min)
Structure/function in Cph1 and plant phytochromes

11:30 *Coffee break + snacks*

Cafeteria
Room 1.1.25

Final Discussion Round

12:30-14:00

14:00 *Departure*

SFB Speakers

Alexiev, Ulrike	A2	FUB
Bartl, Franz	B5	HUB
Heyne, Karsten	B7	FUB
Herder, Luisa	B6	Charité
Hildebrandt, Peter	B6	TUB
Hoang, Tui	C2	TUB
Hughes, Jon	B7	JLU
Merga, Galaan	B5	HUB
Mroginski, Maria Andrea	C2	TUB
Nagano, Soshi	B7	JLU
Oschkinat, Hartmut	B1	FMP
Scheerer, Patrick	B6	Charité

External Speakers

Forest, Katrina
Frankenberg, Nicole
Fischer, Reinhard
Ihalainen, Janne
Kennis, John
Lagarias, Clark
Lamparter, Tilman
Rinaldi, Jimena
Stojković, Emina
Winkler, Andreas

