

# Kobe Seminar on Quantum Biology and Technology

Organized by: Molecular Photoscience Research Center, Kobe University  
Co-organized by: Carbon Neutral Promotion Headquarters  
Sponsor: Kobe University Strategic International Collaborative Research Grant (Type B Fostering Joint Research)  
Date : Thursday, October 2, 2025, 9:30-17:00  
Place : Takigawa Memorial Hall, Kobe University  
WEB : <https://sites.google.com/gsuite.kobe-u.ac.jp/kobequantum/home>

## Invited Speakers

Prof. Stefan Weber (University of Freiburg)  
Prof. Olav Schiemann (University of Bonn)  
Prof. Kazunobu Sato (Osaka Metropolitan University)  
Prof. Tetsuro Kusamoto (University of Osaka)  
Prof. Hikaru Kuramochi (University of Osaka)  
Prof. Hiroki Nagashima (Saitama University)  
Prof. Shigenori Tanaka (Kobe University)



## Program

9:30 Opening Yasuhiro Kobori (Kobe University)

Chair : Hiroki Nagashima (Saitama University)

9:35-10:05 Yasuhiro Kobori  
"Hidden quantum coherences in magnetoreception"  
10:05-10:45 Tetsuro Kusamoto (University of Osaka)  
"Assembled radicals as a platform for spin-correlated luminescence"  
10:45-11:05 Break  
11:05-11:45 Stefan Weber (University of Freiburg)  
"Combining time-resolved EPR and NMR to yield a more complete picture of biological electron transfer"

Lunch

Chair : Takashi Tachikawa (Kobe University)

13:00-13:40 Olav Schiemann (University of Bonn)  
"Unraveling the conformational landscape of CRISPR/Cas13a with Pulsed Dipolar EPR Spectroscopy"  
13:40-14:20 Kazunobu Sato (Osaka Metropolitan University)  
"Molecular spin quantum information science and technology: Spin relaxation and quantum control as studied by pulsed ESR method"  
14:20-14:40 Break

Chair : Yasuhiro Kobori (Kobe University)

14:40-15:20 Hikaru Kuramochi (University of Osaka)  
"Mapping ultrafast chemical reaction dynamics in complex molecular systems via vibrational coherence"  
15:20-16:00 Hiroki Nagashima (Saitama University)  
"EPR Characterization of Magnetic Field-Sensitive Proteins"  
16:00-16:40 Shigenori Tanaka (Kobe University)  
"Quantum Effects in Biological Systems"

Closing

16:40-17:00 Lab Tour