

Workshop on “Optically Addressable Molecular Lanthanide Qubits for Quantum Devices” in Baden-Baden, Germany, from 05.10.2023 to 06.10.2023.

Venue

Leonardo Royal Hotel
Falkenstraße 2 76530
Baden-Baden Germany

Programme

Thursday, 5. October 2023

Arrivals from 10.00 am.

12:00 Lunch

Chair: [Prof. Mario Ruben](#)

13:00 Plenary talk: Prof. Vahid Sandoghdar: Molecular Quantum Photonics.

13:40 Talk 1 Prof. David Hunger: Spectroscopy and cavity integration of molecular rare earth ion complexes for quantum information applications.

14:10 Talk 2 Dr. Philippe Goldner: Coherent optical and spin properties of nano-structured rare earth crystals.

14:40 Talk 3 Dr. Patrice Bertet: Single electron spin resonance with microwave photon counting.

15:10 Talk 4 Dr. Samuele Grandi: Detection of single ions in a nanoparticle coupled to a fiber cavity.

15:40-16:00 Coffee Break

Chair: [Dr. Senthil Kumar Kuppusamy](#)

16:00 Talk 5 Prof. Michael Seitz: Modulation of Luminescence Parameters in Molecular Lanthanoid Complexes.

16:30 Talk 6 Dr. Aline Nonat: Molecular complexes and assemblies for medical imaging, photovoltaic and quantum information processing.

17:00 Talk 7 Dr. Benoit Heinrich: How can X-ray techniques be used to investigate the mosaicity and the crystalline quality of molecular crystals?

17:30 Talk 8 Dr. Max Atwood: Organic molecular spins for robust room temperature masers and other quantum technologies.

18:00 Talk 9 Prof. Alex Clark: Coherent Molecular Quantum Photonics.

18:30-19:00 Break

19:00 Dinner

20.00 After dinner talk: Prof. Mario Ruben: Quantum Computing with Molecules.

Friday, 6. October 2023

07:30-08:30 Breakfast

Chair: Prof. Mario Ruben

08:30 Plenary talk Dr. Diana Serrano: Rare-Earth Complexes: a new material platform for optical quantum technologies.

09:10 Talk 10 Dr. Costanza Toninelli: Molecules for photonic quantum technologies.

09:40 Talk 11 Dr. Audrey Bienfait: Probing micro-crystals and pL-dropets using superconducting circuits.

10:10 Talk 12 Prof. Stephan Götzinger: Coupling single molecules to optical antennas.

10:40-11:00 Coffee Break

Chair: Dr. Senthil Kumar Kuppusamy

11:00 Talk 13 Dr. Ori Mor: Interfacing nanophotonic devices with RE complexes.

11:30 Talk 14 Mr. Jean-Gabriel Hartmann and Mr. Denis Jankovic: Quantum Gate Generation for Hyperfine Molecular Qudits.

12:00 Talk 15 Prof. Vincent Robert: Coordination chemistry for spin-Qubits generation.

12:30-12:35 Concluding remarks

12:35 Lunch

14:00 Departures