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Who – community, bottom up

Why – quantum revolution

How – develop common projects ideas , prep for opportunities

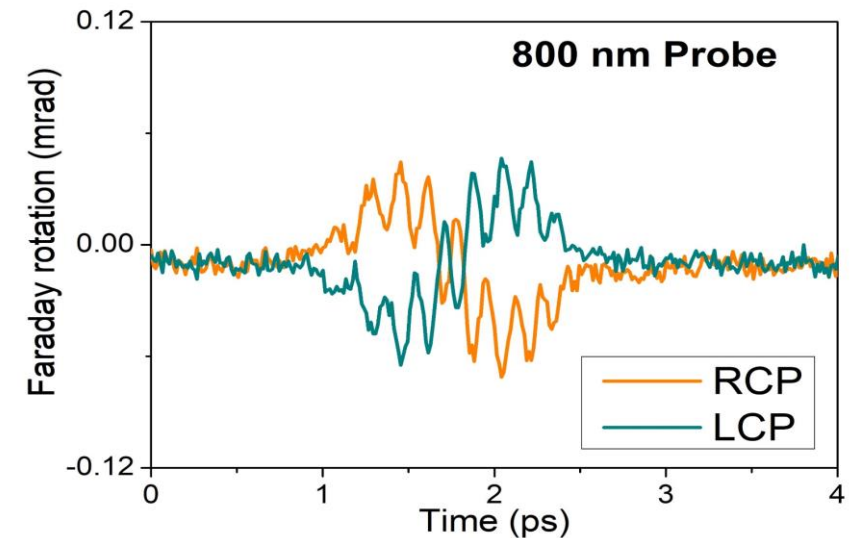
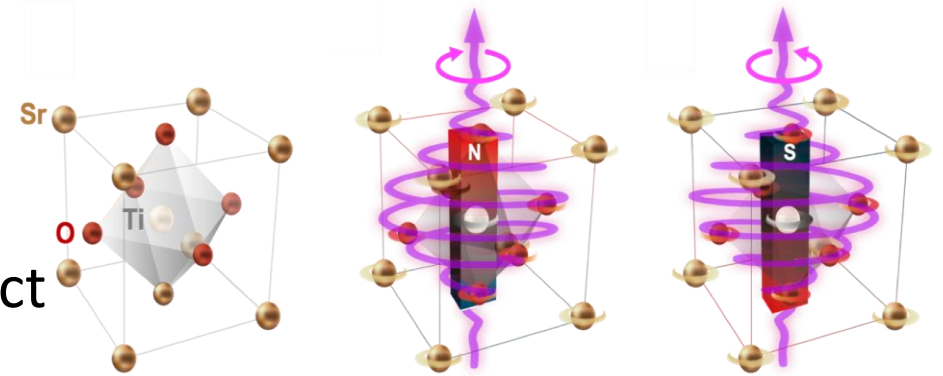
Slide One: Expertise and Core Strengths

- Quantum materials
- Superconductivity
- Dirac Materials
- Light- matter interactions – Inverse Faraday Effect
Rectified Quantum Orders

Core strength: modeling, unconventional SC state
topological materials, modeling disorder,
dynamics of light driven materials

Rectified magnetic order in light driven quantum

- Light induced magnetic order in STO – Quantum



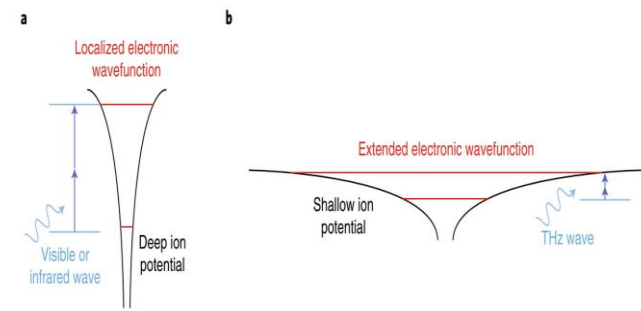
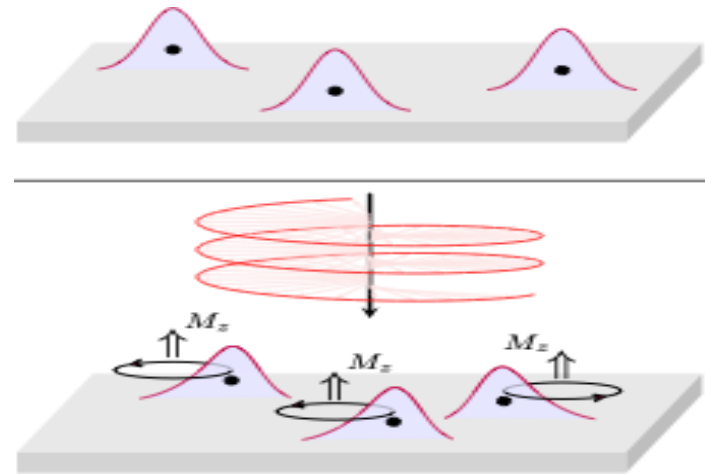
Slide Two: What Excites you about Quantum Technologies

- Superposition -> parallelism
- Entanglement -> remote sensing
- Artificial Quantum Matter -> light control

Slide Three: Collaboration Ideas

Proposed work:

* IFE and control of a single spin in shallow dopant states in Rydberg states and Si:Ph



P. Wong, et al, in progress

* ferroelectric interfaces with controlled quantum spin coherent states – magnetic adatoms

* Possible applications: spin states, strain, magnetic sensors, magnetic memory

