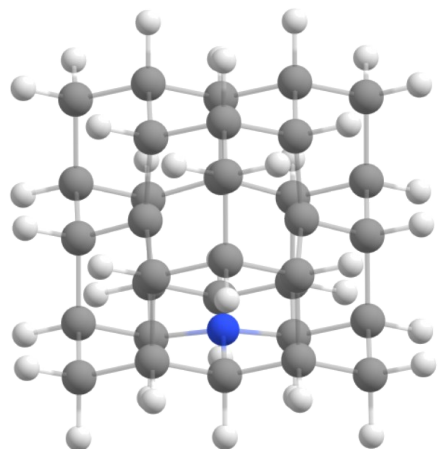


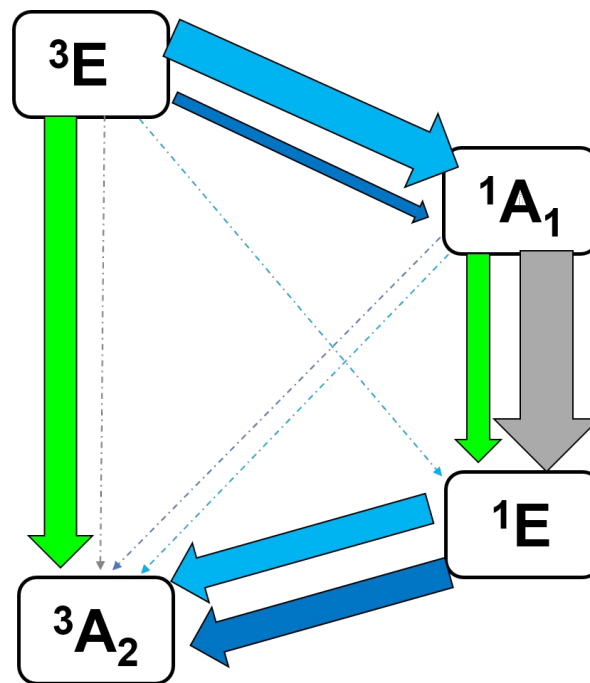
Quandidate

Empowering quantum chemistry
to find novel point defect quantum bits

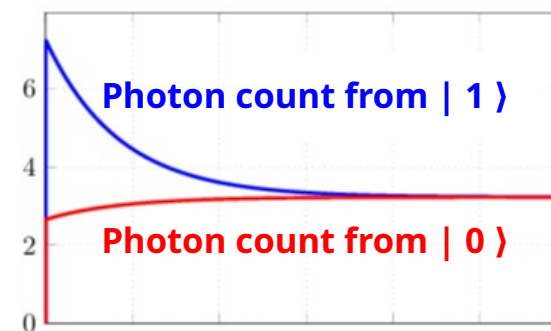
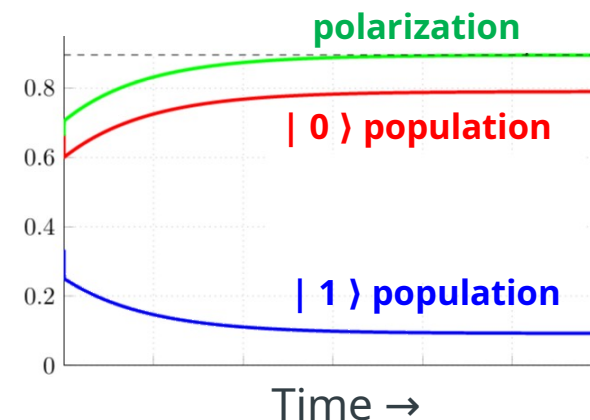


Defect
candidate

Quandidate



Electronic states,
quantitative rate model

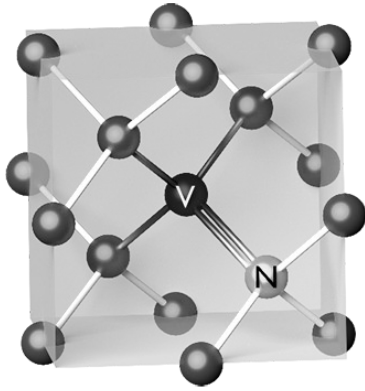


Simulation of **qubit**
initialization and readout

The quest to find NV- alternatives

The present of defect qubits:

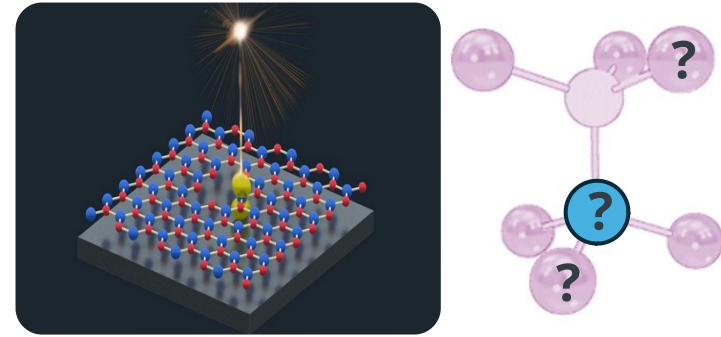
NV- in diamond



- Well-characterized qubit properties...
- ... which became clear after decades of research
Spectroscopy, pulsed spin, ODMR, single-photon correlation, electronic structure theory, etc.

The future of defect qubits:

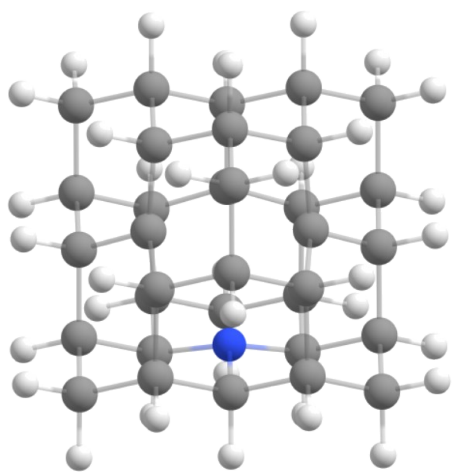
(any defect) in (any crystal)



- The possibilities are endless!
- No time for long research on a single defect!

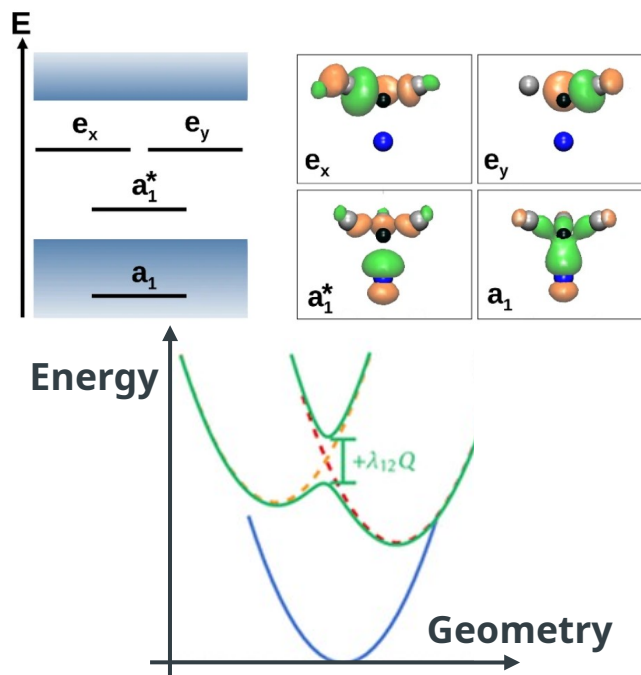
Quandicate: a **shortcut** to full qubit characterization

INPUT:



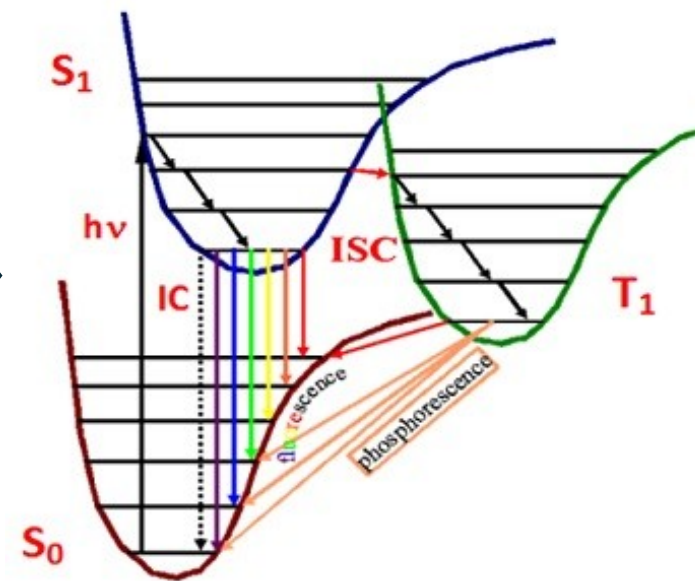
Defect model

PHASE 1

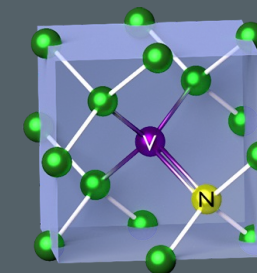
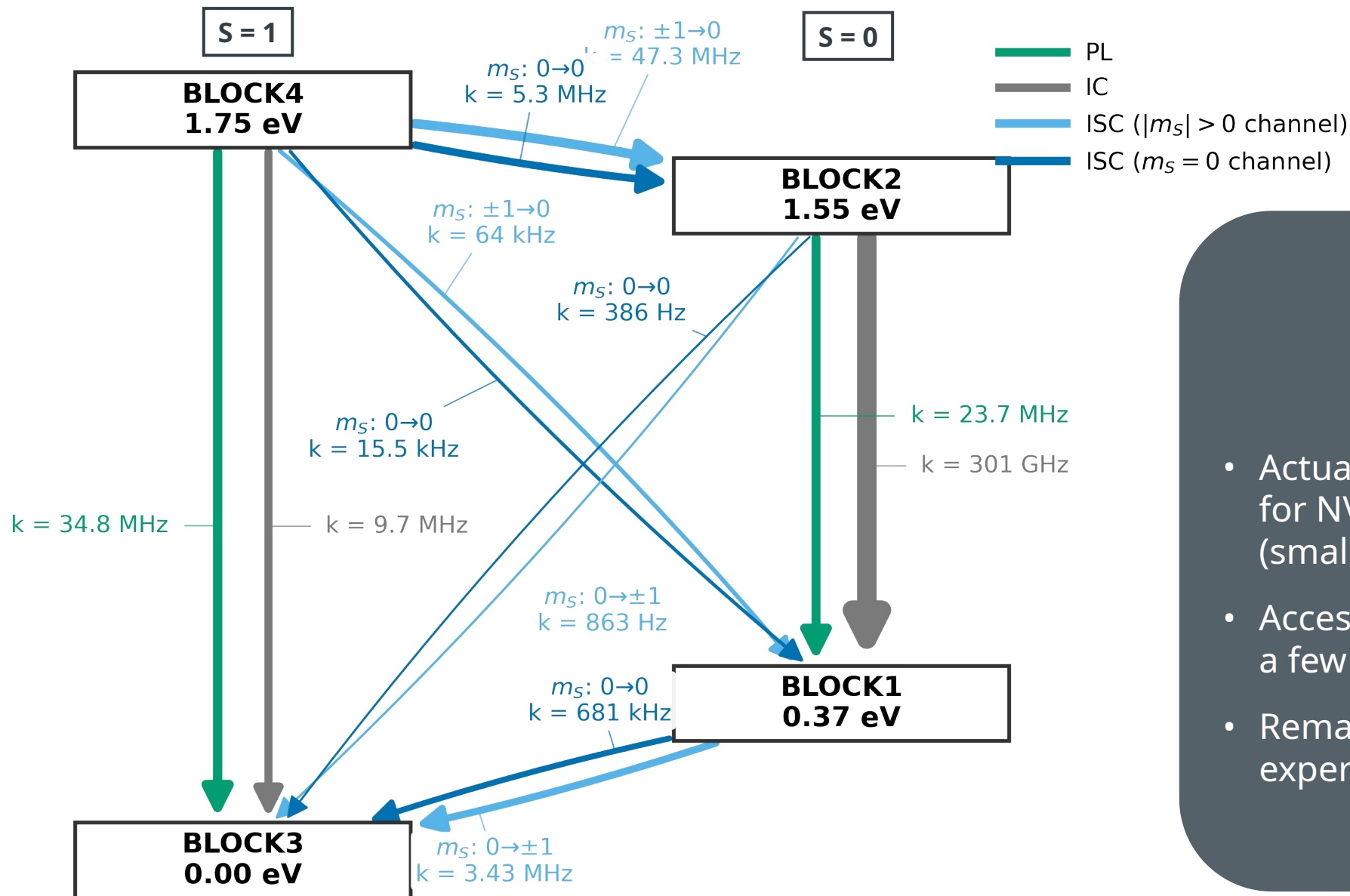


Automated high-level
quantum chemistry

PHASE 2



Automated high-level
excited-state dynamics



- Actual Quandidate results for NV⁻ in diamond (small model)
- Accessible within a few 100 CPU hours
- Remarkable agreement to experimental rates