Engineering novel quantum materials

for quantum computing and quantum devices

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Light-matter interaction
Lasers interacting with atoms, molecules, 2D materials, etc.

Many-body and topological quantum phenomena
Spin-squeezing, topological edge states, etc.

Applications
Quantum computing
Quantum metrology
Quantum simulation
Quantum information

Circularly polarized light
Bi-layer graphene

Raman lasers

BEC

Ising limit
Collective limit

squeezing

Edge states