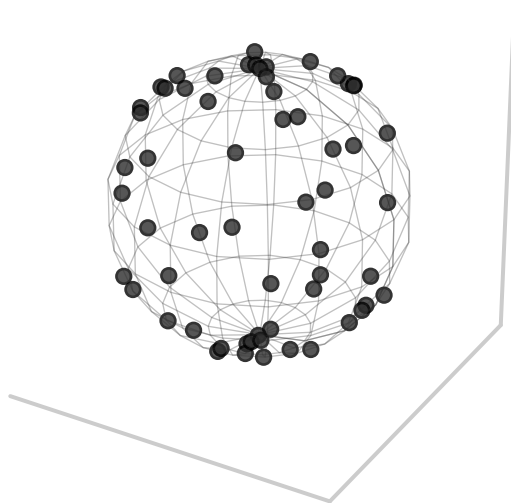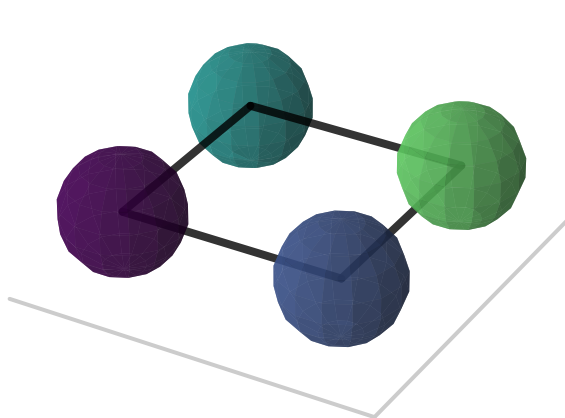# Strain-Tuned Heteroatom-Doped Graphullerene Networks: Engineering Quantum Transport Properties
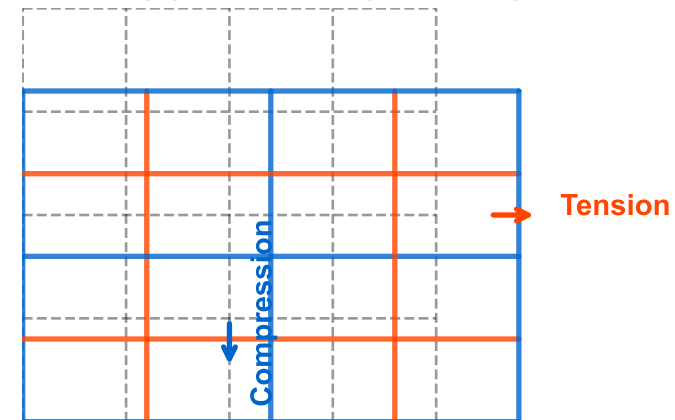

(a) C_{60} Fullerene

(b) qHP C_{60} Network

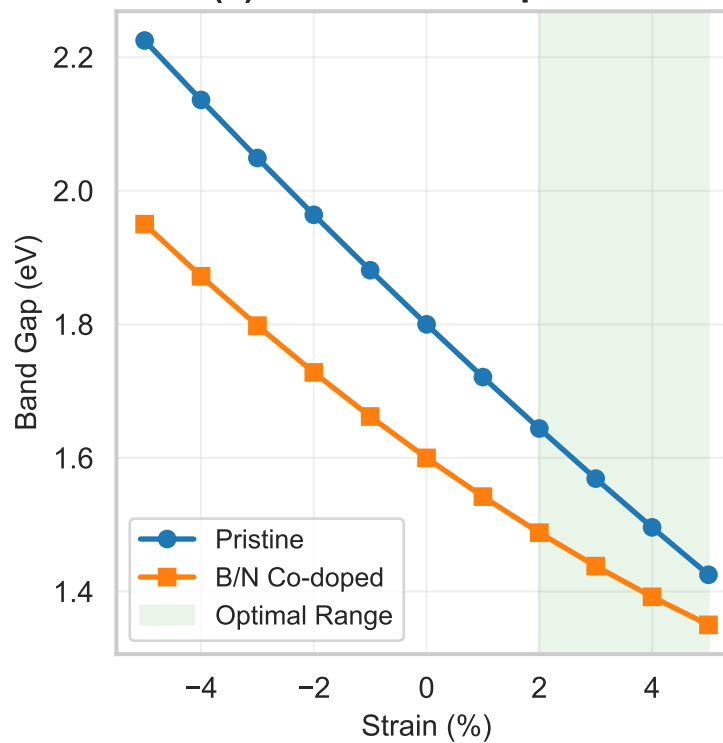(c) Strain Engineering
Tension
Compression

(d) Heteroatom Doping
B
N
P

(e) Electronic Properties
Band Gap (eV)
Strain (%)
Pristine
B/N Co-doped
Optimal Range

(f) Synergistic Enhancement
Electron Mobility ($cm^2 V^{-1} s^{-1}$)
8.7
11.3
12.8
21.4
300% Enhancement
Pristine
Strain Only
Doping Only
Combined