

- Systems: Au_{72} wire, C_{254} bilayer graphene, $(\text{NiC}_2\text{O}_4)_{54}$ bulk and $(\text{TiO}_2)_{32}$ slab. C_{254} and $(\text{NiC}_2\text{O}_4)_{54}$ have two vacancies.
- Exchange-correlation: PBE (Au_{72}), vdW-DF1 (C_{254}), SCAN ($(\text{NiC}_2\text{O}_4)_{54}$), HSE06 ($(\text{TiO}_2)_{32}$).
- Brillouin zone integration: 4 grid points (Au_{72}); Γ -point ($\text{C}_{254}, (\text{NiC}_2\text{O}_4)_{54}$); 2×2 grid points ($(\text{TiO}_2)_{32}$).
- Type of calculation: Single point. Spin-polarized ($\text{C}_{254}, (\text{NiC}_2\text{O}_4)_{54}$).
- Discretization: 0.25 Bohr ($\text{Au}_{72}, (\text{TiO}_2)_{32}$), 0.29 Bohr (C_{254}), 0.24 Bohr ($(\text{NiC}_2\text{O}_4)_{54}$) in SPARC; 40 Ha ($\text{Au}_{72}, \text{C}_{254}, (\text{TiO}_2)_{32}$), 50 Ha ($(\text{NiC}_2\text{O}_4)_{54}$) in QE.
- Accuracy: $\sim 1 \times 10^{-4}$ Ha/atom in energy.