

# Supplied materials

## Modulating multi-functional molecular devices in Zigzag Gallium Nitride Nanoribbons by different magnetic orderings : First-principles study

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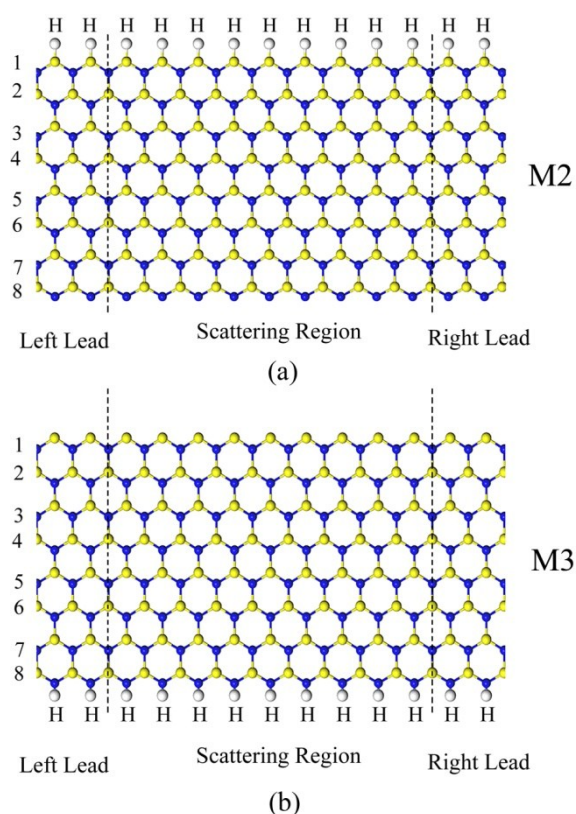


Fig. S1. (a-b) Schematic of the model devices of M2 and M3. The region outside the two dashed lines indicate the leads with two repeated carbon unit cells along the transport direction.

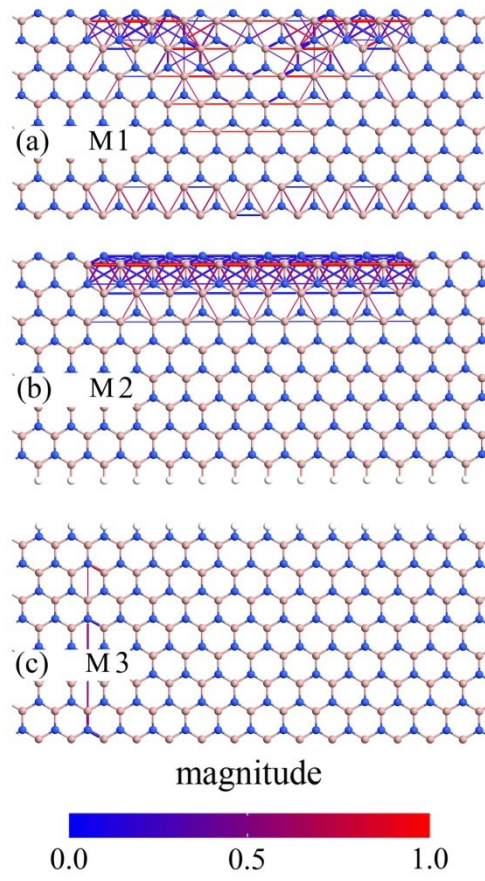


Fig. S2. (a-c) The total spin transmission pathways of M 1, M 2, and M 3 with P spin configuration at Fermi energy, respectively.

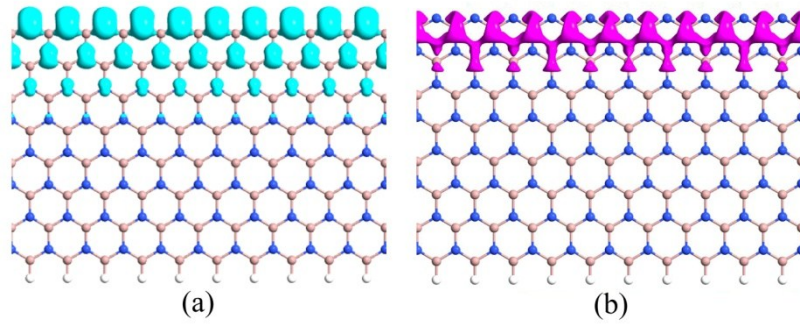


Fig. S3. The isosurfaces of spin density for M 2 with P and AP-1 spin configurations, in which the acid blue and roland purple colors present the spin down and spin up states, respectively.